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VHS VIDEO CASSETTE PLAYER RVP-9800

Rosen™

Rosen™ SERVICE MANUAL

VHS VIDEO CASSETTE PLAYER

RVP-9800

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE "SAFETY PRECAUTIONS", IN THIS MANUAL.

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SAFETY&PRECAUTIONS

SAFETY CHECK AFTER SERVING

Examine the area surrounding the repaired location for damage or deterioration. Observe that screw, parts and wires have been returned to original positions. Afterwards, perform the following tests and conform the specified values in order to verify compliance whit safety standards.

1. Insulation resistance test

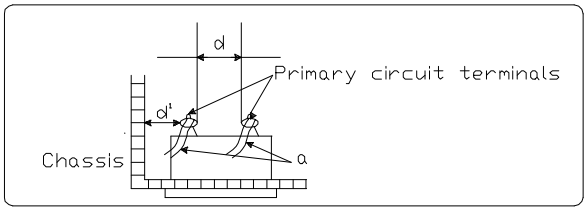
Confirm the specified insulation resistance between power cord plug prong and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) isgreater than values given in table 1 below.

2. Dielectric strengthen test

Confirm specified dielectric strengthen between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input output terminals, microphone jack, ear phone jacks, etc.) is greater than values given table 1.

3. Clearance distance

When replacing primary circuit component, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table below.



Rating for selected areas

AC Line Voltage	Region	Insulation Resistance	Dielectric Strength	Clearance Distance(d),(d)
100V	Japan	**P** 1MΩ/500V DC	1§ AC 1min.	**P** 3
110 to 130V	USA & Canada	-	900V AC 1min.	**P** 3.2
* 110 to 130V 200 to 240V	Europe Australia Latin America	**P** 10MΩ/500V DC	4§ AC 1min.	**P** 6(d) **P** 8(d') (a :Power cord)

* : Class II model only

NOTE : This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality

4. Leakage current test

Confirm specified or lower leakage current between B(earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input output terminals, microphone jacks, earphone jacks, etc.)

Measuring method:(Power ON) Insert load Z between B(earth ground, power cord plug prongs) and exposed accessible parts. Use on AC voltmeter to measure across both terminals of load Z. See figure2 and following table.

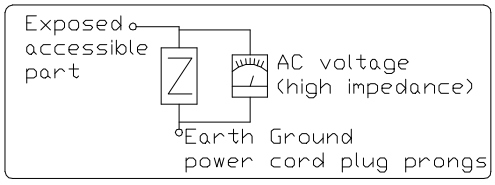


Fig.2

Leakage current ratings for selected are as

AC Line Voltage	Region	Load Z	Leakage Current(!)	Clearance Distance(d),(d')
100V	Japan	1kΩ	!**O** 1mA rms	Exposed accessible parts
110 to 130V	USA &Canada	1.5kμF, 1.5kΩ	!**O** 0.5mA rms	Exposed accessible parts
110 to 130V 200 to 240V	Europe Australia	2kΩ	!**O** 0.7mA peak !**O** 2mA dc	Antenna earth terminals
		50kΩ	!**O** 0.7mA peak !**O** 2mA dc	Other terminals

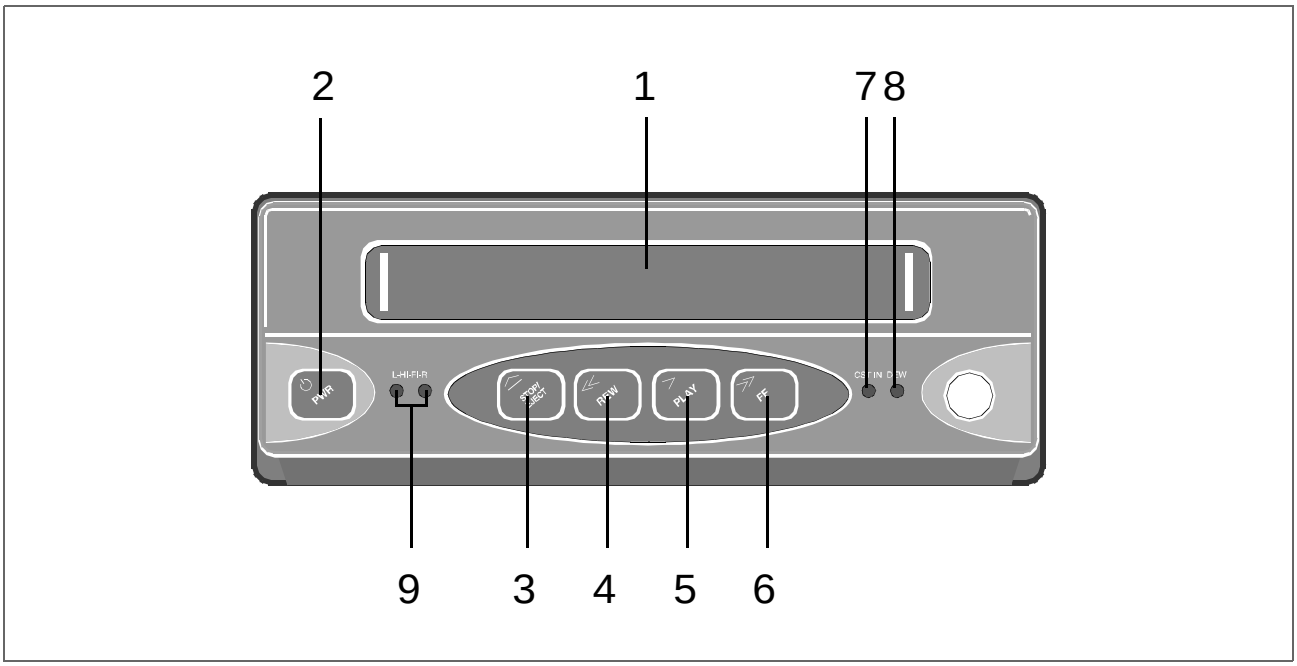
NOTE : This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SPECIFICATIONS

FORMAT	VHS standard
Playback System	Video: 2 rotary heads helical scanning system Luminance: FM azimuth Playback Chroma: converted sub-carrier phase shifted playback Audio: 2 rotary heads helical scanning system Luminance: FM azimuth Playback Chroma: converted sub-carrier phase shifted playback
Video Signal System	NTSC type color signal
Tape width	12.65mm (1/2 inch)
Tape Speed	SP : 33.35 mm/s LP : 16.67 mm/s SLP : 11.12 mm/s
Maximum Playback Time	480min. with T-160 Video cassette tape (SLP mode)
FF/REW Time	Less than 5 min
Power Input	DC 12V 12W
Out level	Video : VIDEO OUT jack 1.0Vp-p 75Ω unbalanced Audio : AUDIO OUT jack 10KΩ unbalanced
Video Horizontal Resolution	More than 230 Lines
Signal-to-Noise Ratio	Video:better than 43dB Audio:better than 40dB HiFi Audio:better than 60dB
Operating Temperature	5°C ~ 40°C (41° F ~ 104° F)
Weight	3.4kg : Net (- -kg : Gross)
Dimensions	265 X 91X295 (WHD) mm

** Design and specifications are subject to change without notice.*

IDENTIFICATION AND OPERATION OF CONTROLS



1 Casette compartment

2 Power key

When the power is supplied for the set, the power indicator lamp will always light up in red.

The Power ON and Power OFF mode will be toggled by pressing this key.

When the POWER is switched on, the power lamp will light up in red and the other keys will light up in green.

3 Stop/Eject key

Press this key to stop tape and once more to eject tape.

4 Rewind/Review key

If this key is pressed in the PLAYBACK mode, the VCP enters the reverse picture search mode. If pressed in STOP mode, then the tape will rewind at high speed.

The REW indicator lamp will light up in orange.

5 PLAY key

Press this key to playback a recorded tape, or to release special operations such as the search modes.

In the playback mode the playback indicator lamp will be light in orange, and in Auto Tracking mode, this indicator lamp will blink.

6 Fast Forward/ Cue key

If this key is pressed in the PLAYBACK mode, the VCP enters the forward picture search mode. If pressed in STOP mode, then the tape will fast forward at high speed.

The FF indicator lamp will light up in orange.

7 Cassette-In lamp

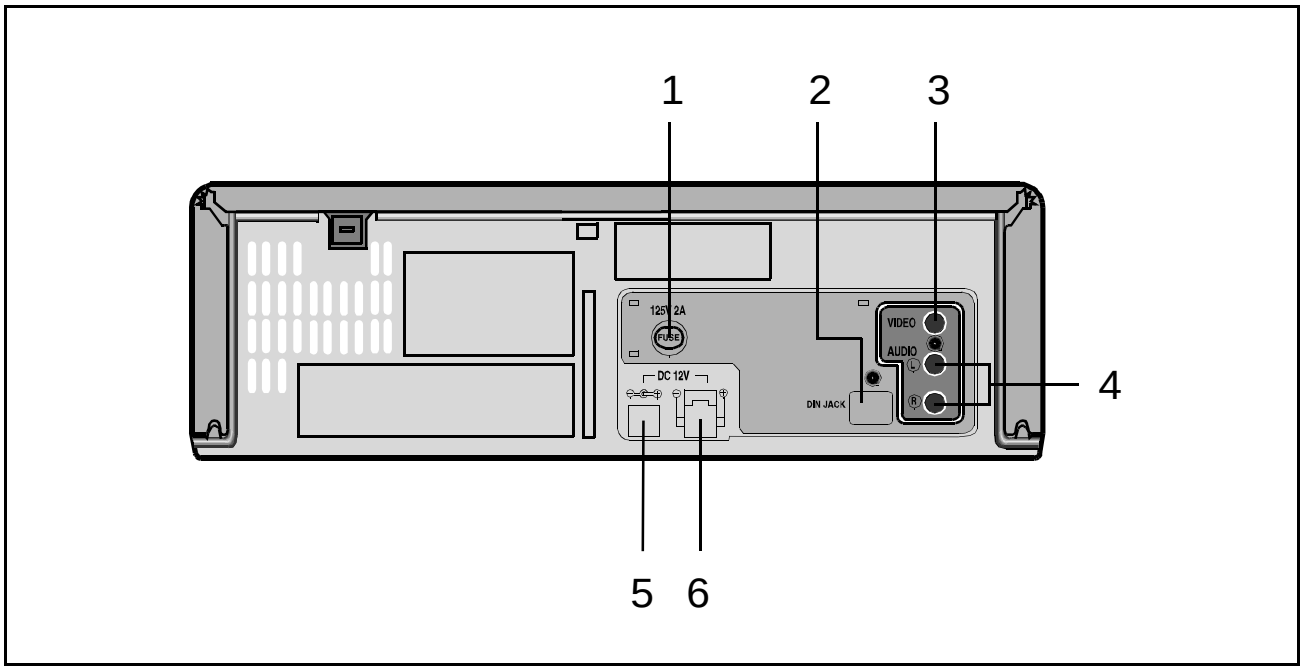
When the cassette is inserted, the CST-IN lamp will light up in red.

8 DEW lamp

This indicator will flash (if power is on) to indicate excessive moisture has been inside of VCP. This unit will not operate until it dries out sufficiently (the tape can be ejected from the unit). When DEW mode has been activated, leave the unit on to allow it to dry out completely.

9 Hi-Fi Lamps

In the Hi-Fi output mode, these lamps will light up in green.



1 FUSE HOLDER

This main line fuse is accessible with the external fuse holder simply by unscrewing the cap. If the main line fuse should blow then replace the fuse with a proper rated fuse (125V, 2A).

2 DIN JACK

1PIN	S.STATUS DATA OUT	6 PIN	GND RIGHT RETURN
2PIN	GND	7PIN	VIDEO OUT
3PIN	EXT. REMOTE DATA IN	8PIN	AUDIO LEFT
4PIN	GND	9PIN	AUDIO RIGHT
5PIN	GND LEFT RETURN		

3 VIDEO OUT

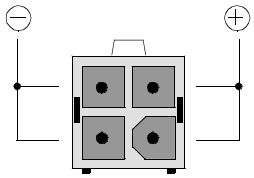
Connect this terminal to VIDEO IN terminal of your television, using the RCA cord provided.

4 AUDIO OUT L/R

Connect this terminal to AUDIO IN terminal of your television, using the RCA cord provided.

5 6 DC JACK IN

Connect this jack to DC Source (DC 12V).



CABINET DISASSEMBLY

1. COVER TOP

Remove four screws (see Fig 2-1).

Lift the COVER TOP with holding the back of it and remove it.

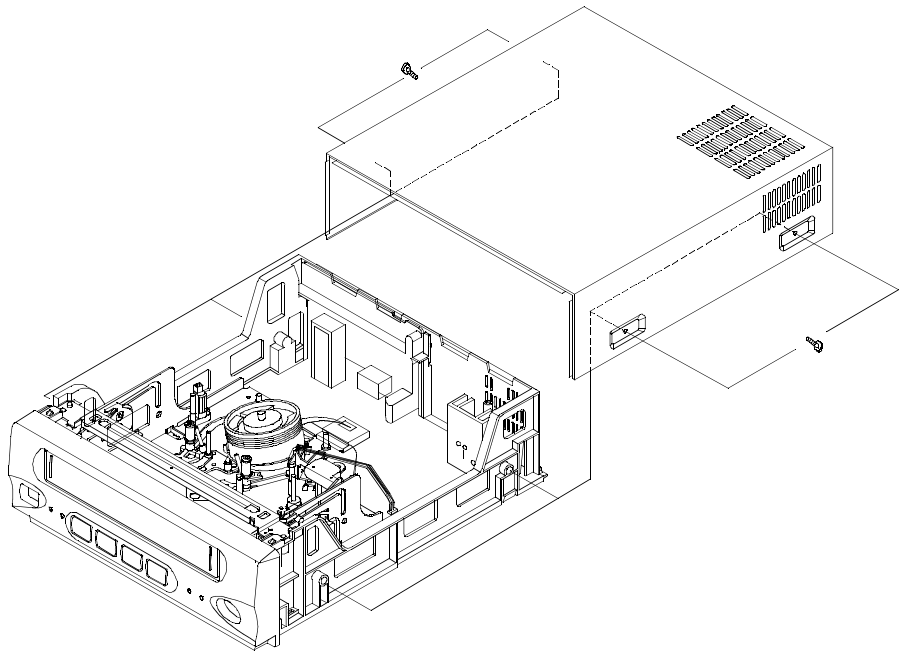


Fig. 2-1

2. COVER BOTTOM

Remove one screw to remove the COVER BOTTOM (see Fig2-2).

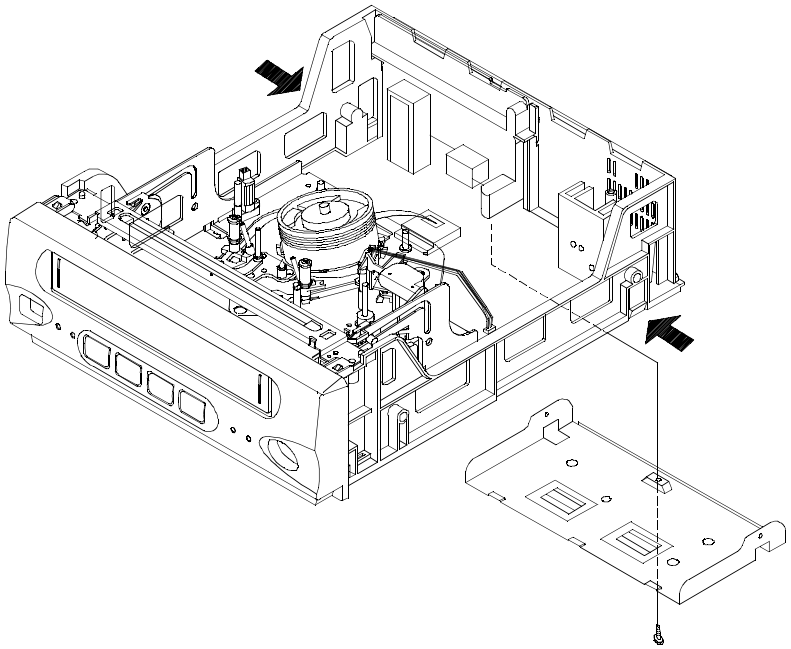


Fig. 2-2

3. PANEL FRONT AS.

Remove the COVER TOP. (See Fig 2-1)

Remove the COVER BOTTOM. (See Fig 2-2)

Press five stoppers in direction of the arrows to disengage - the top side of the panel front toward - to remove it (See Fig 2-3).

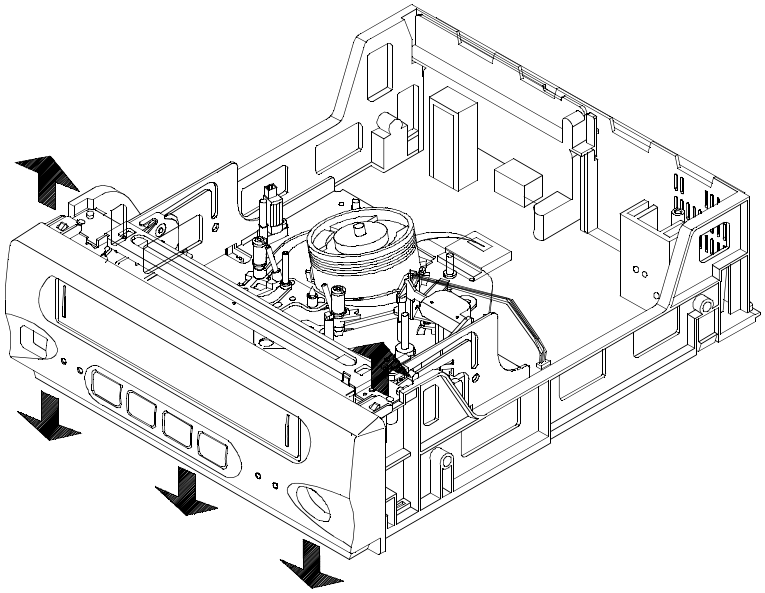


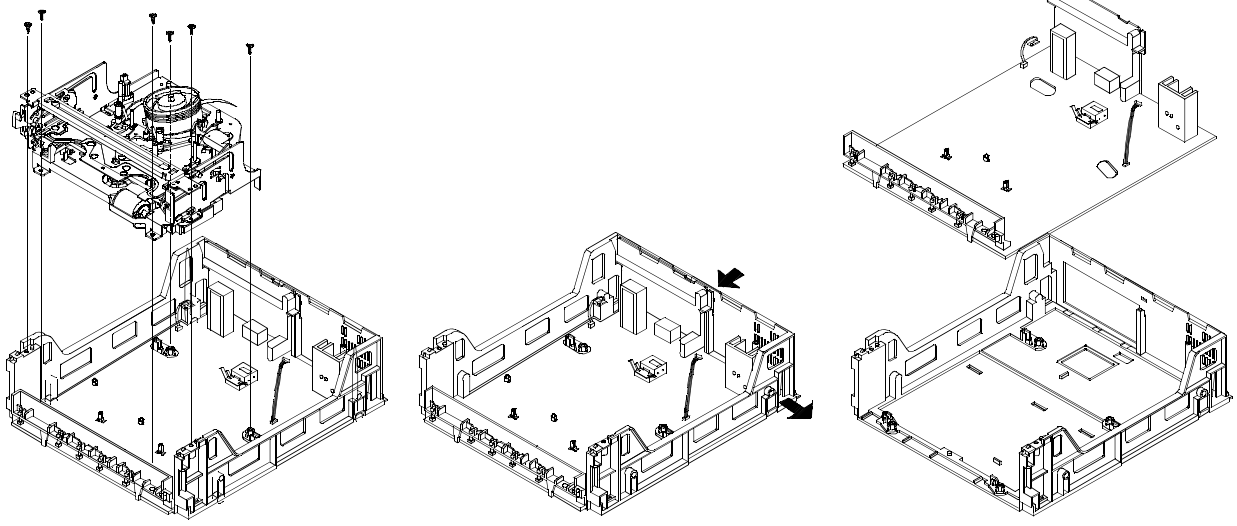
Fig. 2-3

CIRCUIT BOARD DISASSEMBLY

1. PCB MAIN AS.

Remove six screws and disassemble the DECK mechanism.(see Fig 2-5A)

Press two stoppers in direction of the arrow (see Fig 2-5B) and separate the Main Chassis from the Main PCB by lifting the PCB (see Fig 2-5C).

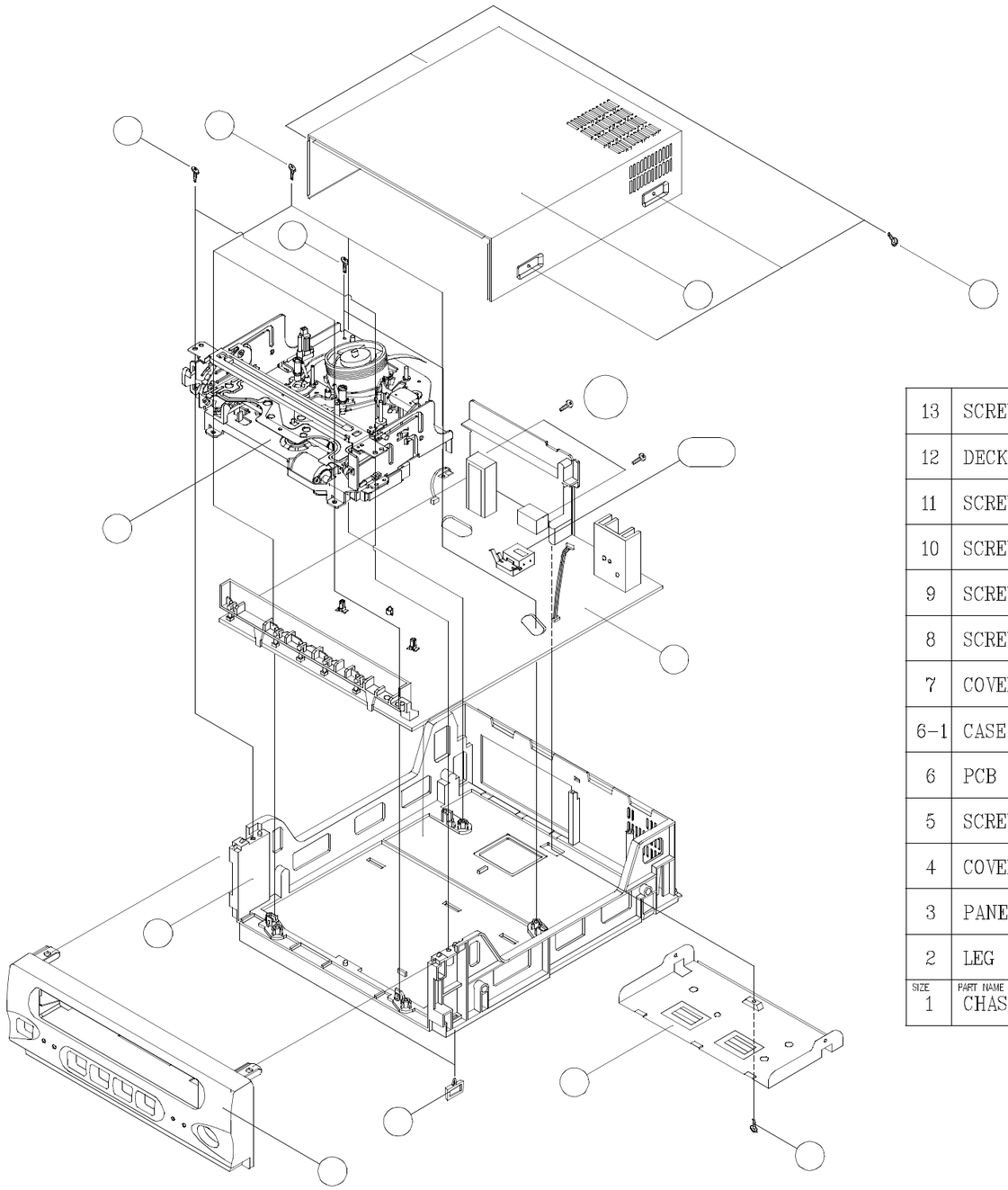


(A) (B) (C)

Fig. 2-5

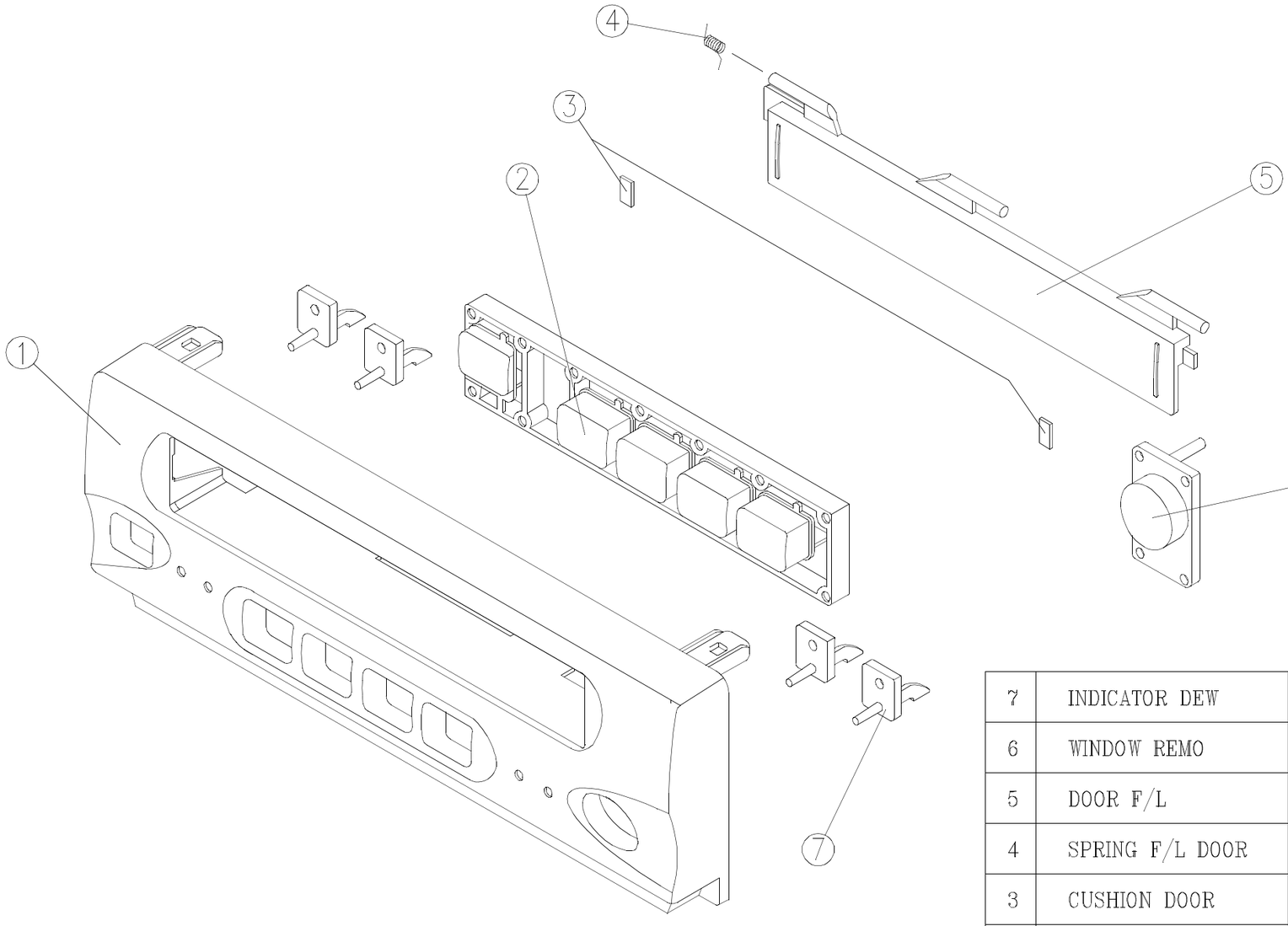
EXPLODED VIEW

1. MAIN CHASSIS ASS'Y



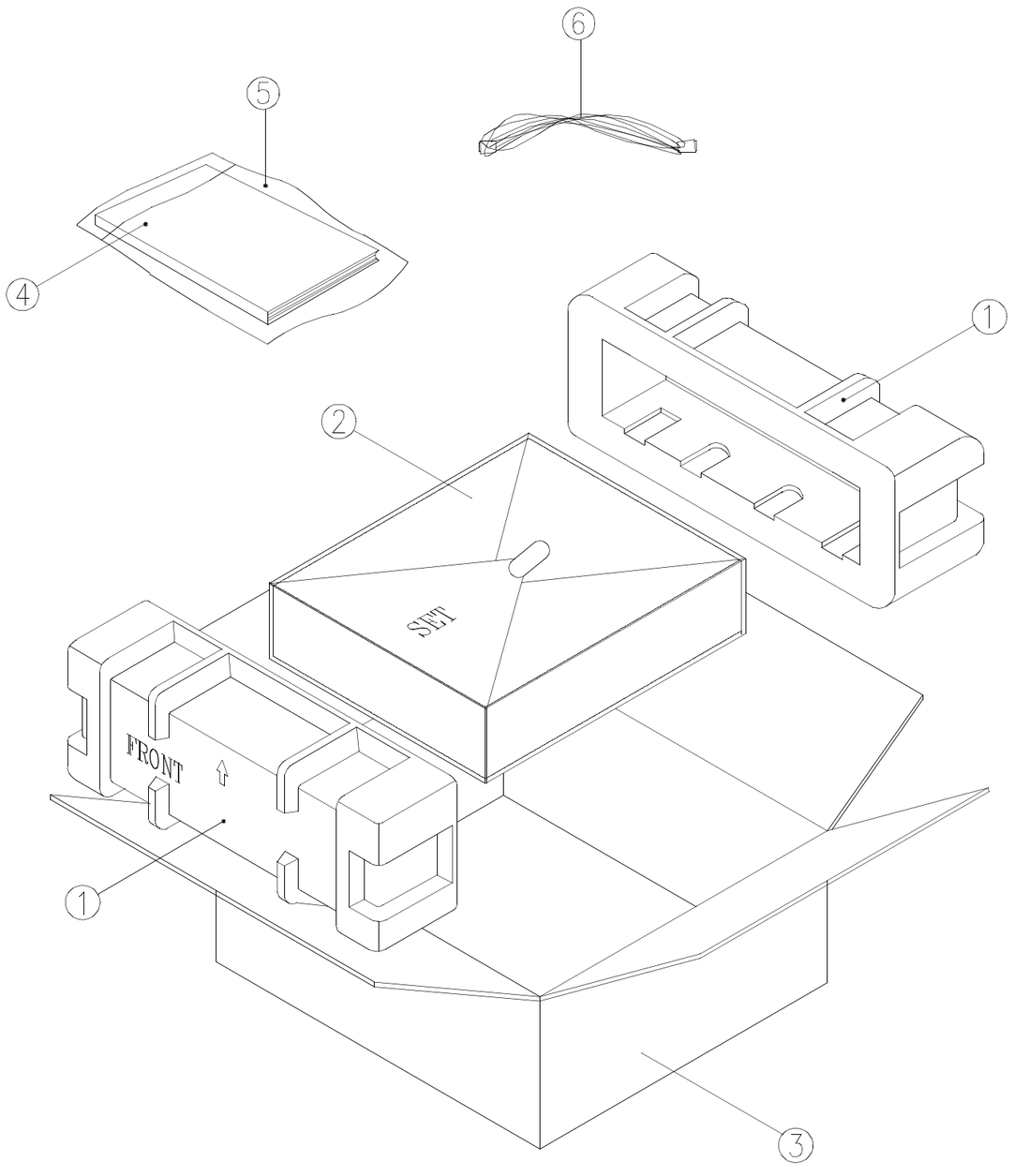
13	SCREW MACHINE	7175301012	2	TT2 FLT 3X10 MFZN BLK	A/V. DIN JACK
12	DECK TOTAL AS	97PC0211D-	1	VDN-83000	
11	SCREW MACHINE	7003300611	1	BIN 3X6 MFZN FOR CD PCB	DEW SENSOR FIX
10	SCREW TAPPTITE	7173401211	2	TT2 BIN 4X12 MFZN	F/L FIX
9	SCREW TAPPTITE	7173401211	4	TT2 BIN 4X12 MFZN	DECK AS FIX
8	SCREW TAPPTITE	7173401212	4	TT2 BIN 4X12 BK	COVER TOP FIX
7	COVER TOP	97P0471200	1	SECC T0.5	
6-1	CASE SHI PREAMP AS	97PB239600	1	DV-S104NY-RJ	
6	PCB MAIN AS	97PE101600	1	DV-S124NY-RJ	
5	SCREW TAPPTITE	7173401211	1	TT2 BIN 4X12 MFZN	COVER BOTTOM FIX
4	COVER BOTTOM	97P0471310	1	SECC T0.4	
3	PANEL FRONT AS	97PP320660	1	DV-S124NY	
2	LEG	97P0800600	2	SBR 80 BLK	
SIZE 1	PART NAME CHASSIS MAIN	PART NO. 97P0610460	QUANTITY 1	MATERIAL PC ABS(V0)	REMARK

2. PANEL FRONT ASS'Y



7	INDICATOR DEW	97P1713400	4	PMMA
6	WINDOW REMO	97P1624000	1	PMMA(3322)
5	DOOR F/L	97P1820860	1	PC ABS ALLOY(V0)
4	SPRING F/L DOOR	97P3038000	1	SWPB 1082J
3	CUSHION DOOR	97P4217300	2	FELT T1.0
2	KNOB FUNCTION	97P1363100	1	ABS(NATURAL)
SIZE	PART NAME	PART NO.	QUANTITY	MATERIAL REMARK
1	PANEL FRONT	97P0320660	1	PC ABS ALLOY(V0)

PACKING ASSEMBLY



6	PLUG DC CAR	97P7702300	1	DLP-1033A3	
5	COVER ACCESSORY	97P0424100	2	LD-PE T0.1	
4	SAFTY SHEET	97P9605600	1	ART PAPER	
3	BOX CARTON	97P5045900	1	EX225*K200*EX225	
2	POLYBAG FOR SET	97P4808500	1	P.E FOAM	
NO.	PART NAME	PART NO.	QUANTITY	MATERIAL	REMARK
1	PAD FRONT/BACK	97P4925400	1	EPS	

ELECTRICAL ADJUSTMENT

1. SERVO-LOGIC CIRCUIT ADJUSTMENT METHOD

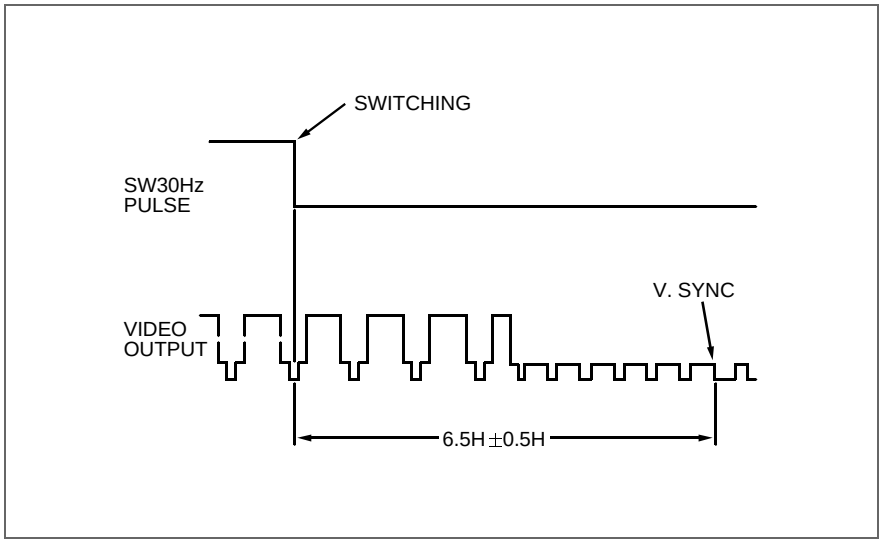
VIDEO HEAD SWITCHING POSITION

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
RV591	PT01 3PIN VIDEO OUT	Oscilloscope	Play	DN-1

1 Playback the test tape.

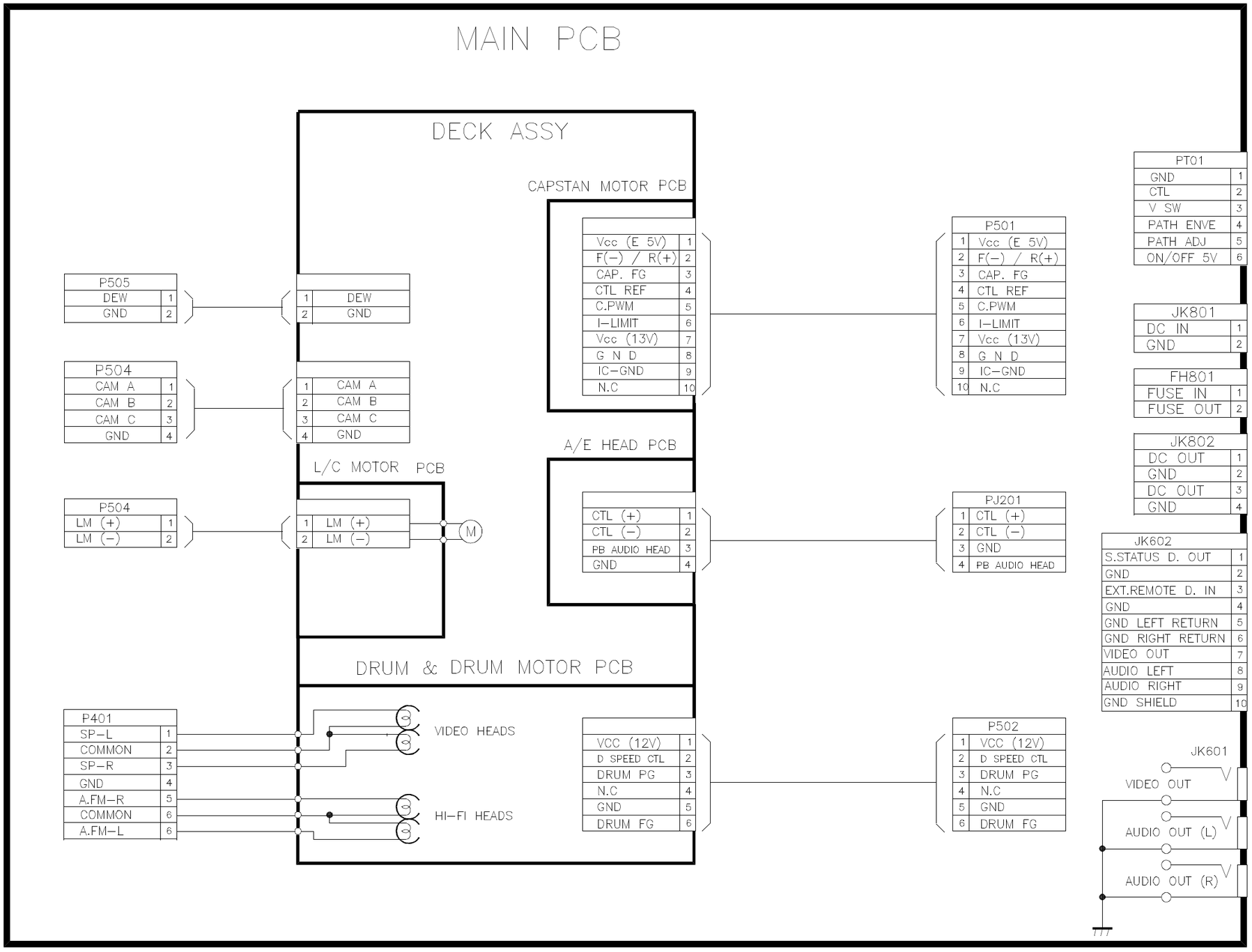
2 Set the oscilloscope in the CHOP mode connect the CH1 to SW pulse PT01 3PIN the CH2 to VIDEO OUT with CH1 triggering.

3 Adjust RV591 for the positive trigger until 6.5H ±0.5H cycles before the vertical SYNC pulse.

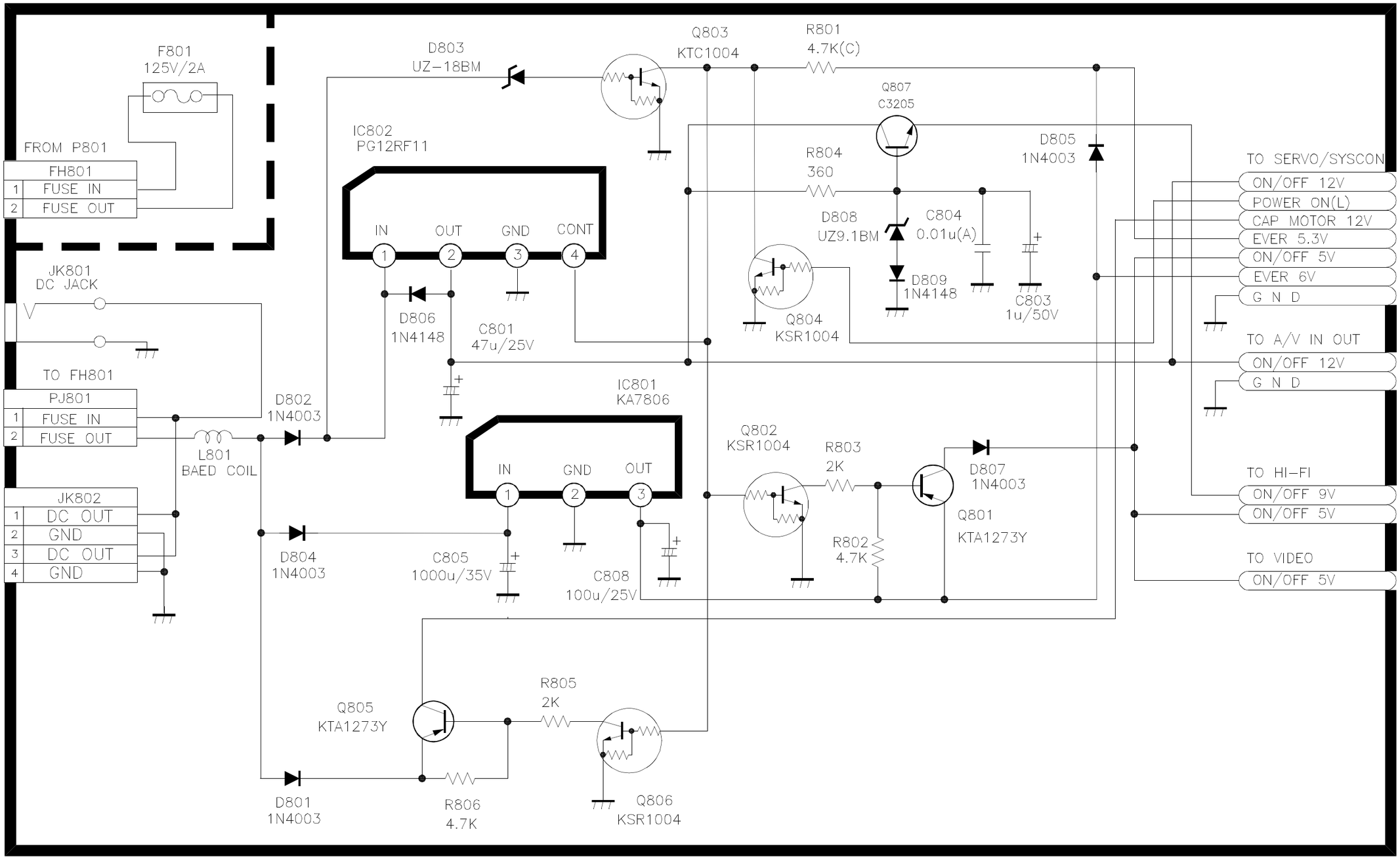


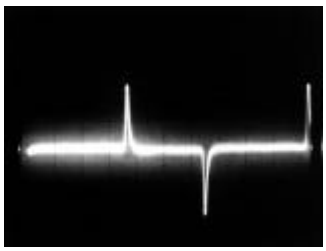
CIRCUIT DIAGRAMS

1. CONNECTION DIAGRAM

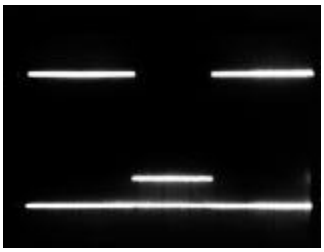


2. POWER CIRCUIT DIAGRAM

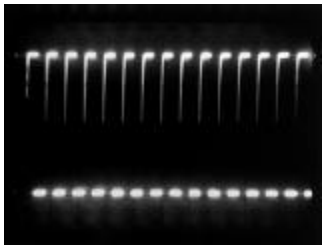




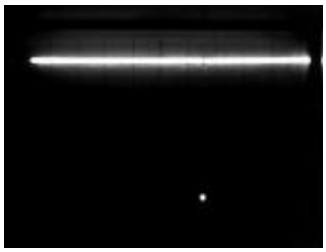
1-1	IC504 #1	PLAY	MODE:AC
VOLT/DIV	500mV/DIV		
TIME/DIV	5ms/DIV		



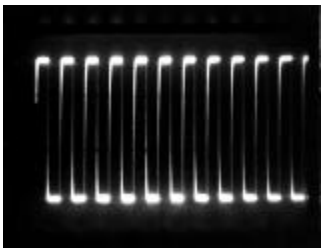
1-2	IC601 #29	PLAY	MODE:DC
VOLT/DIV	1V/DIV		
TIME/DIV	5ms/DIV		



1-3	P502 #6	PLAY	MODE:DC
VOLT/DIV	1V/DIV		
TIME/DIV	2ms/DIV		

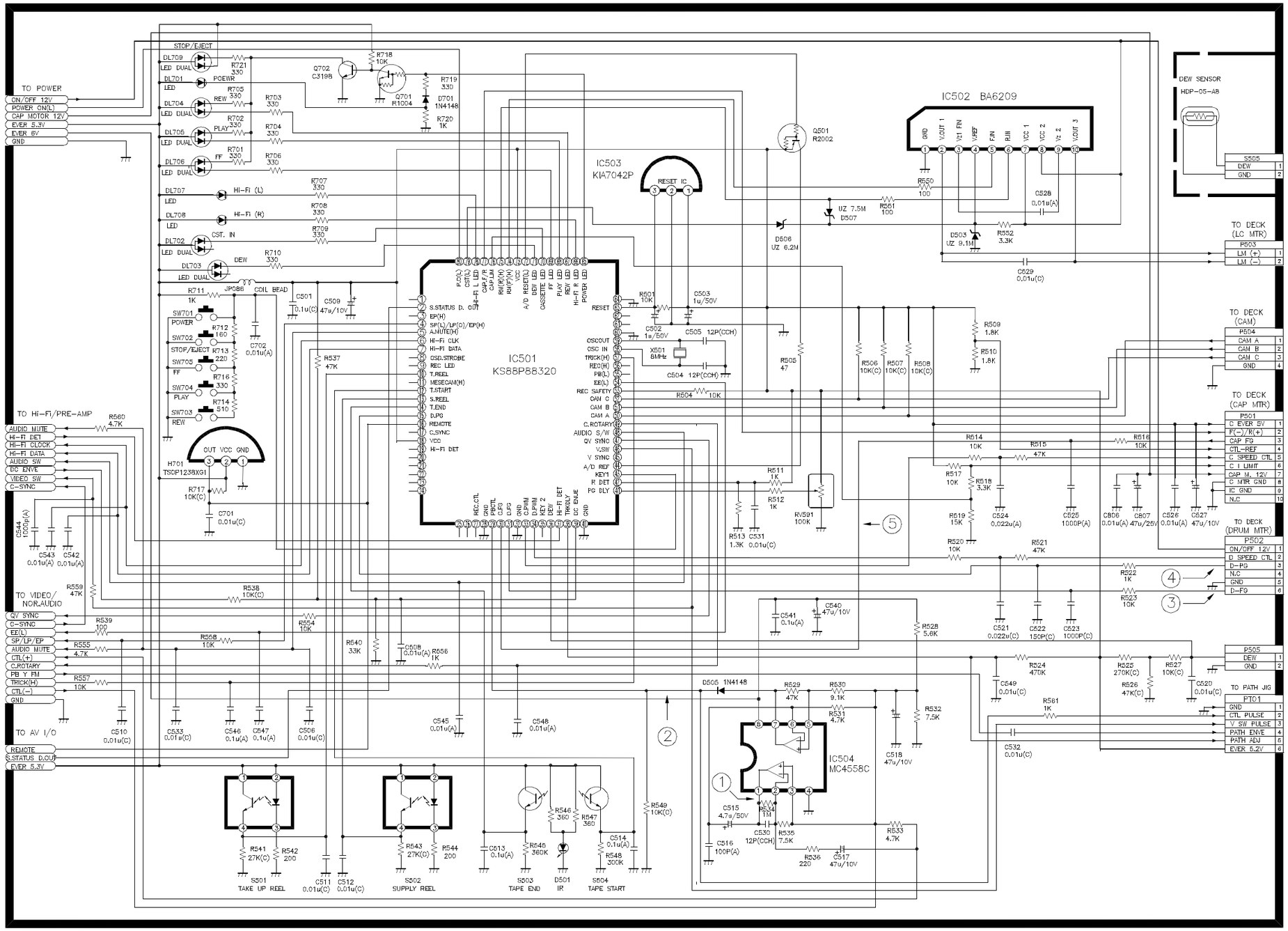


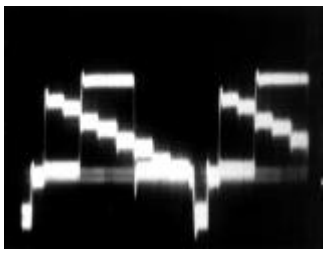
1-4	P502 #3	PLAY	MODE:DC
VOLT/DIV	1V/DIV		
TIME/DIV	53ms/DIV		



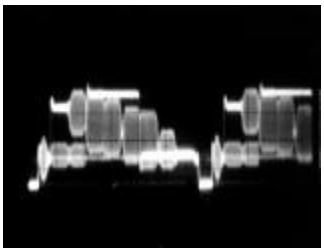
1-5	IC501 #30	PLAY	MODE:DC
VOLT/DIV	1V/DIV		
TIME/DIV	2m/DIV		

3. SERVO SYSCON CIRCUIT DIAGRAM

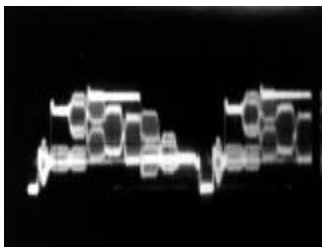




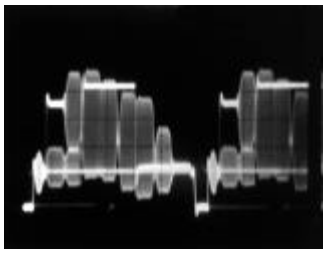
2-1	IC301 #29	PLAY	MODE:AC
VOLT/DIV	100mV/DIV		
TIME/DIV	10ms/DIV		



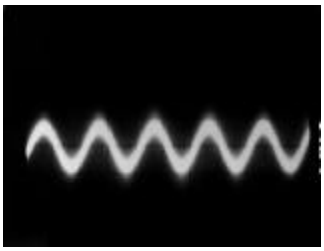
2-2	IC302 #1	PLAY	MODE:AC
VOLT/DIV	100mV/DIV		
TIME/DIV	10ms/DIV		



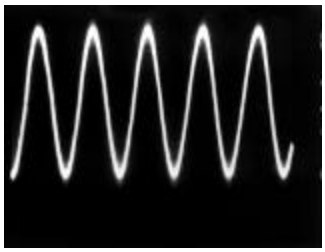
2-3	IC302 #3	PLAY	MODE:AC
VOLT/DIV	100mV/DIV		
TIME/DIV	10ms/DIV		



2-4	IC301 #39	PLAY	MODE:AC
VOLT/DIV	500mVV/DIV		
TIME/DIV	10ms/DIV		

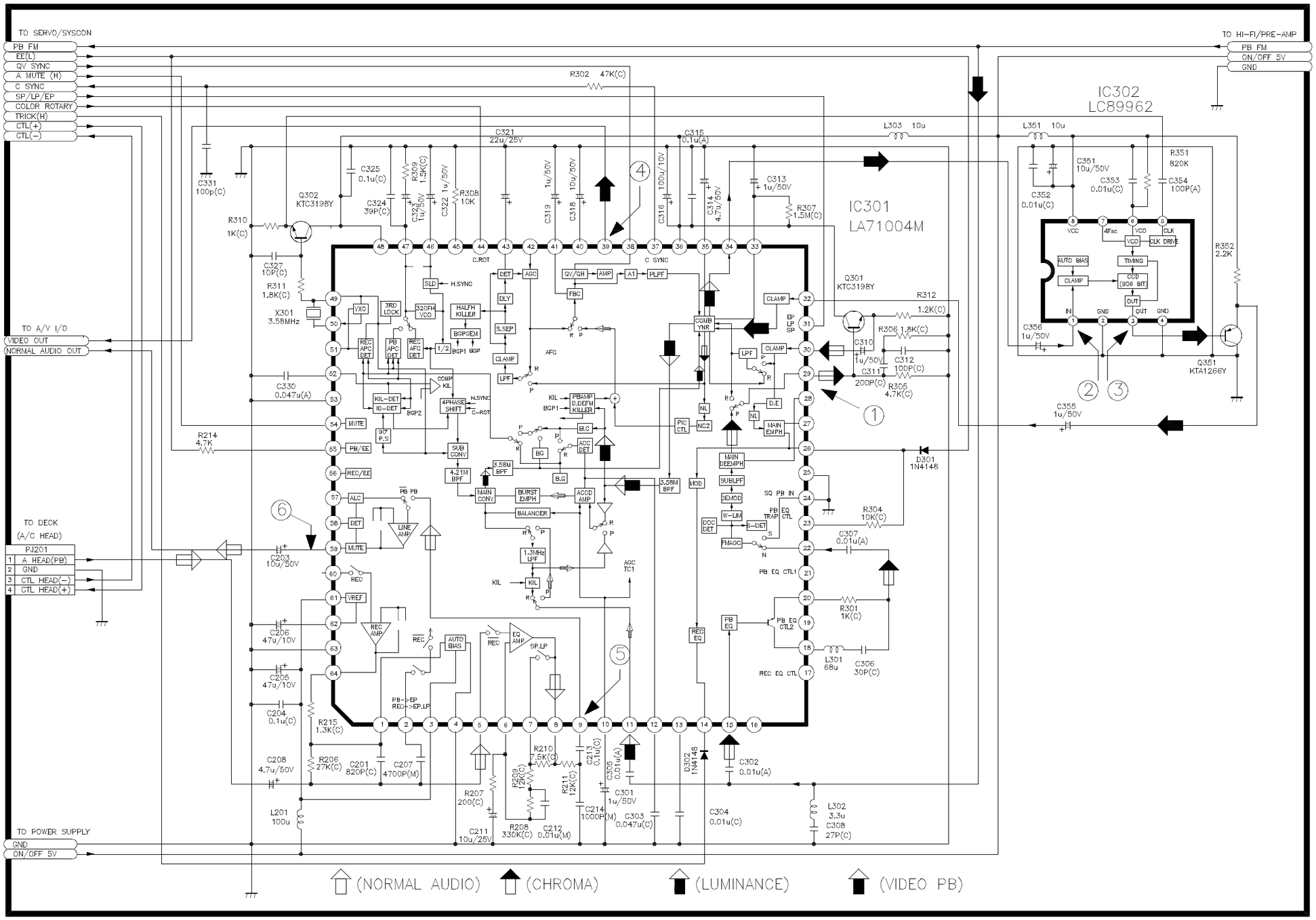


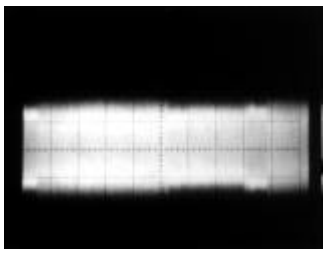
2-5	IC301 #6	PLAY	MODE:AC
VOLT/DIV	50mV/DIV		
TIME/DIV	0.5mS/DIV		



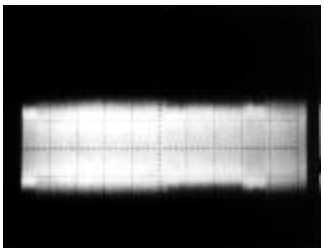
2-6	IC301 #59	PLAY	MODE:AC
VOLT/DIV	200mV/DIV		
TIME/DIV	0.5ms/DIV		

4. VIDEO / NOR & AUDIO CIRCUIT DIAGRAM



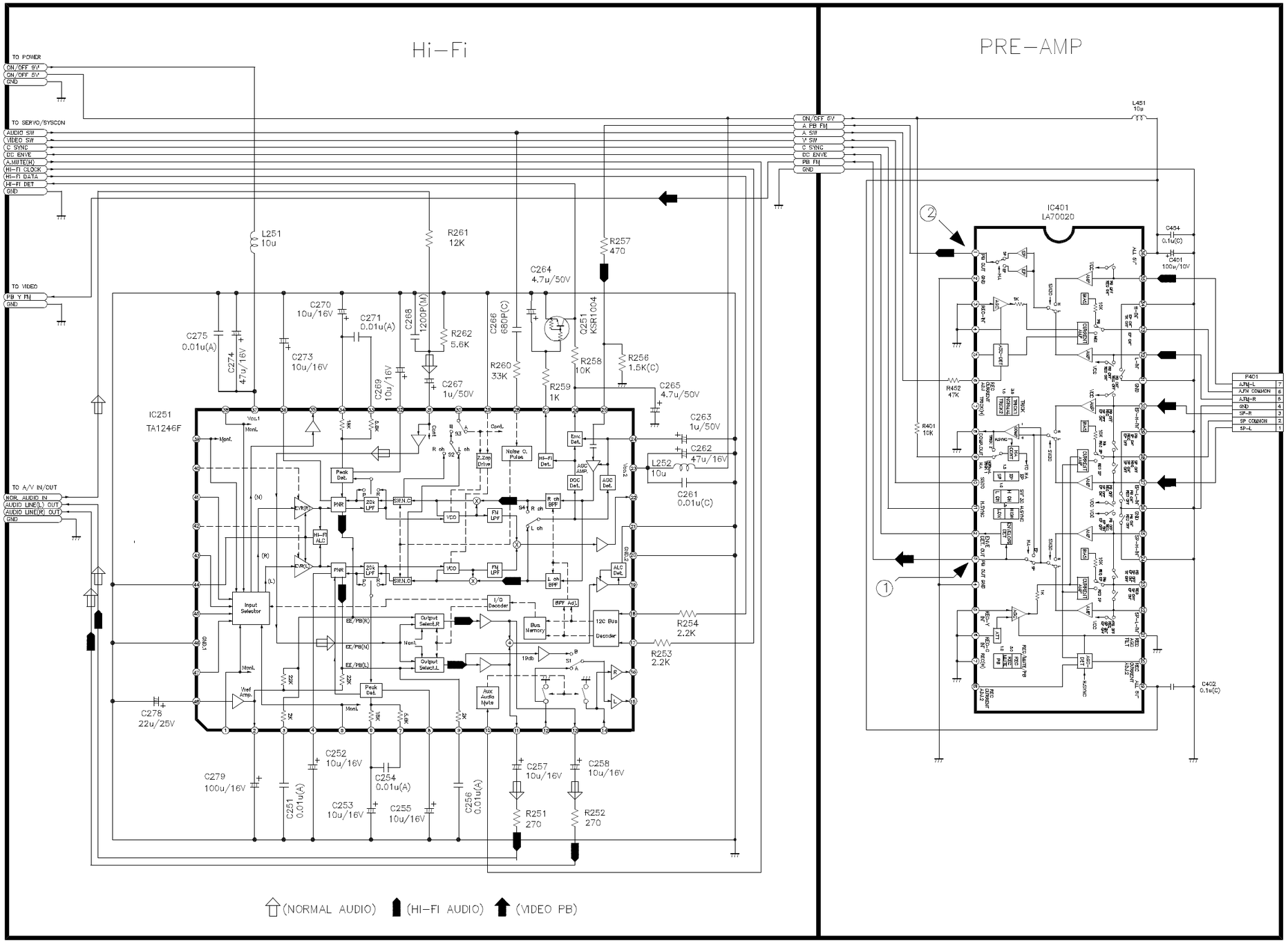


2-1	IC401 #29	PLAY	MODE:AC
VOLT/DIV	100mV/DIV		
TIME/DIV	2ms/DIV		

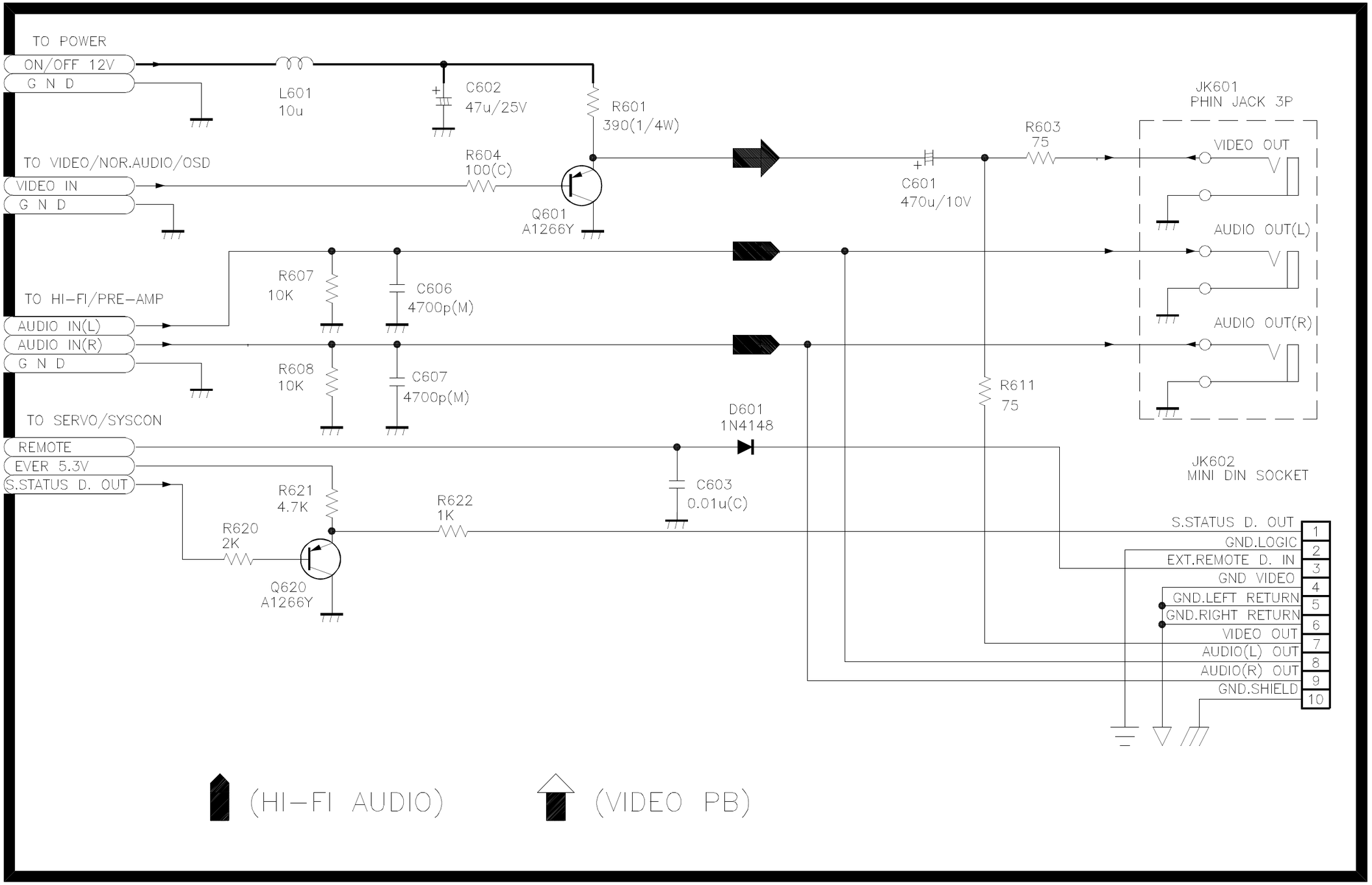


2-1	IC401 #1	PLAY	MODE:AC
VOLT/DIV	500mV/DIV		
TIME/DIV	2ms/DIV		

5. Hi-Fi / PRE-AMP CIRCUIT DIAGRAM

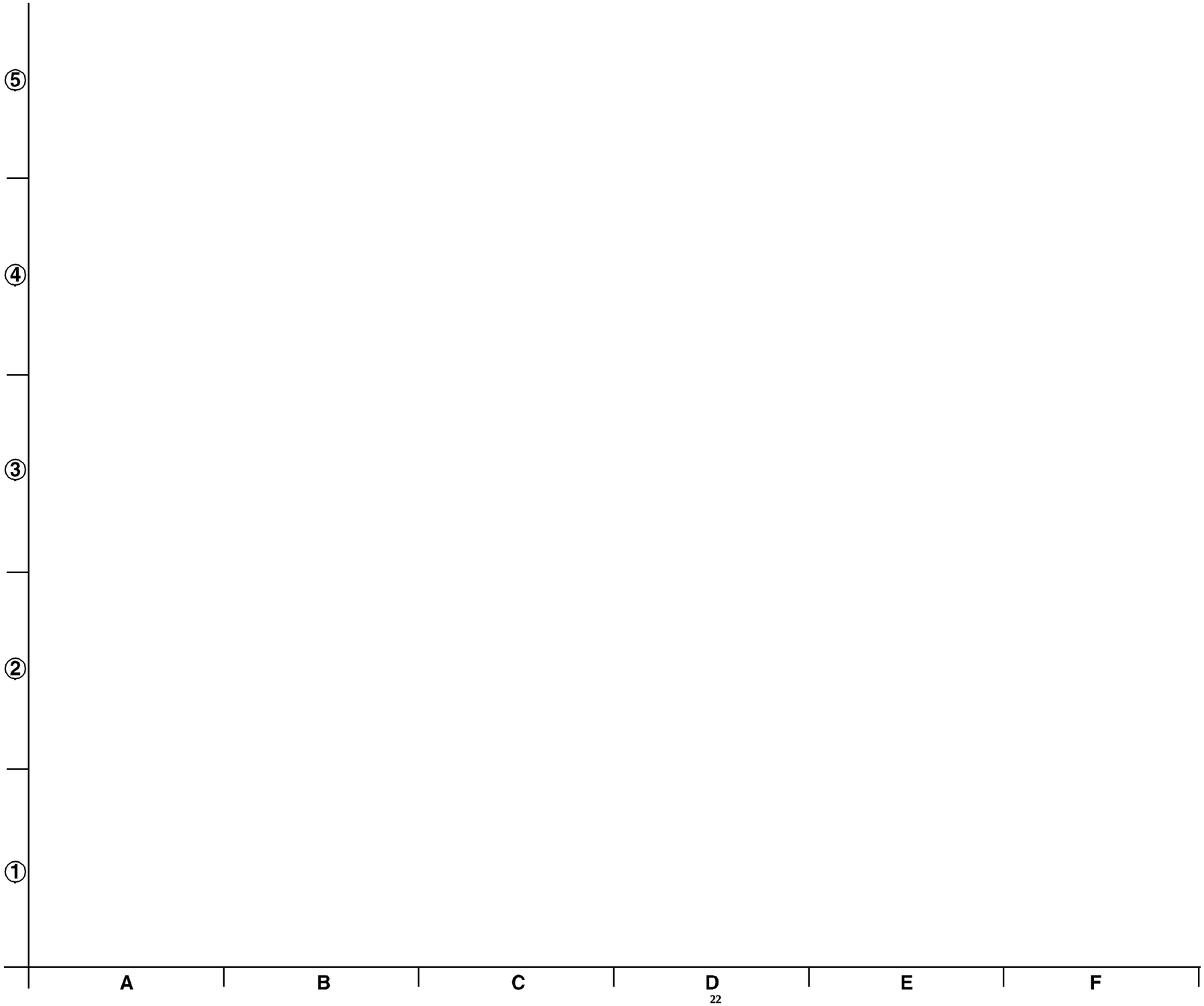


6. A/V IN/OUT CIRCUIT DIAGRAM



COMPONENTS LOCATION GUIDE ON PCB

PCB&CONNECTOR GUIDE



P504	
1	CAM A
2	CAM B
3	CAM C
4	GND

P501	
1	Vcc (E 5V)
2	F(-) / R(+)
3	CAP. FG
4	CTL REF
5	C.PWM
6	I-LIMIT
7	Vcc (13V)
8	GND
9	IC-GND
10	N.C

PJ201	
1	CTL (+)
2	CTL (-)
3	GND
4	PB AUDIO HEAD

P503	
1	LM (+)
2	LM (-)

P401	
1	SP-L
2	SP commom
3	SP-R
4	GND
5	A.FM-R
6	A.FM common
7	A.FM-L

P502	
1	VCC (12V)
2	D SPEED CTL
3	DRUM PG
4	N.C
5	GND
6	DRUM FG

P505	
1	DEW
2	GND

PT01	
1	GND
2	CTL
3	V-SW
4	PATH ENVE
5	PATH ADJ
6	5V

2. COMPONENTS LOCATION GUIDE

I.C. & X-TAL

LOCATION	POSITION
IC301	5E
IC302	5F
IC401	2F
IC501	2C
IC502	5D
IC503	2B
IC504	3D
H701	5A
X301	5E
X601	3B
IC801	5F
IC802	4F
IC251	1D

TR & SEMI VOLUME

LOCATION	POSITION
Q301	4E
Q302	5E
Q351	5F
Q601	1F
Q251	2E
Q701	1B
Q702	1B
Q801	4F
Q802	4F
Q803	4F
Q804	4F
Q805	3F
Q806	4F
RV591	1C
Q807	1C
Q620	1E

CONNECTION & SENSOR

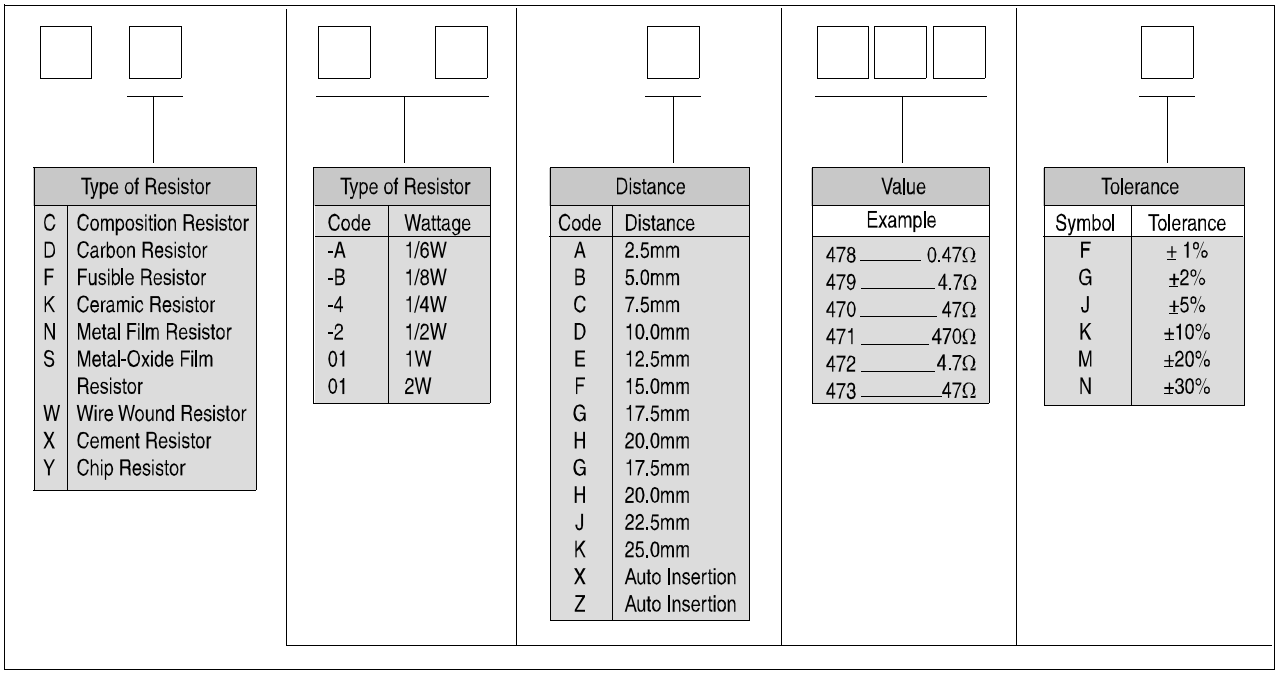
LOCATION	POSITION
D601	3C
P401	2F
PT01	3F
P501	4C
P502	2E
P503	4B
P504	5B
PJ201	4D
P505	1E
P801	3F
S501	4B
S502	2B
S503	1C
S504	5C

ELECTRICAL PARTS LIST

1. STANDARD PART NUMBER CODING

RESISTOR CODING

1 FIxed Resistor Coding



Type of Resistor	
C	Composition Resistor
D	Carbon Resistor
F	Fusible Resistor
K	Ceramic Resistor
N	Metal Film Resistor
S	Metal-Oxide Film Resistor
W	Wire Wound Resistor
X	Cement Resistor
Y	Chip Resistor

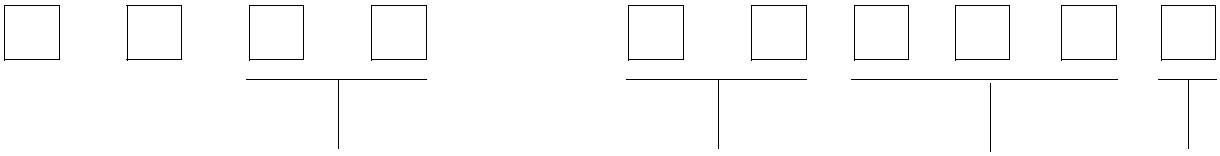
Type of Resistor	
Code	Wattage
-A	1/6W
-B	1/8W
-4	1/4W
-2	1/2W
01	1W
01	2W

Distance	
Code	Distance
A	2.5mm
B	5.0mm
C	7.5mm
D	10.0mm
E	12.5mm
F	15.0mm
G	17.5mm
H	20.0mm
G	17.5mm
H	20.0mm
J	22.5mm
K	25.0mm
X	Auto Insertion
Z	Auto Insertion

Value	
Example	
478	0.47Ω
479	4.7Ω
470	47Ω
471	470Ω
472	4.7Ω
473	47Ω

Tolerance	
Symbol	Tolerance
F	± 1%
G	±2%
J	±5%
K	±10%
M	±20%
N	±30%

2 Semi-Fixed Resistor Coding



Material		Shape	Knob	Code	
CARBON FILM	1	VERTICAL	WITH	1	11
			WITHOUT	2	12
		HORIZONTAL	WITH	3	13
			WITHOUT	4	14
METAL GRAZE	5	VERTICAL	WITH	1	21
			WITHOUT	2	22
		HORIZONTAL	WITH	3	23
			WITHOUT	4	24
CARBON SOLID	5	VERTICAL	WITH	1	51
			WITHOUT	2	52
		HORIZONTAL	WITH	3	53
			WITHOUT	4	54
CERMIET	6	VERTICAL	WITH	1	61
			WITHOUT	2	62
		HORIZONTAL	WITH	3	63
			WITHOUT	4	64

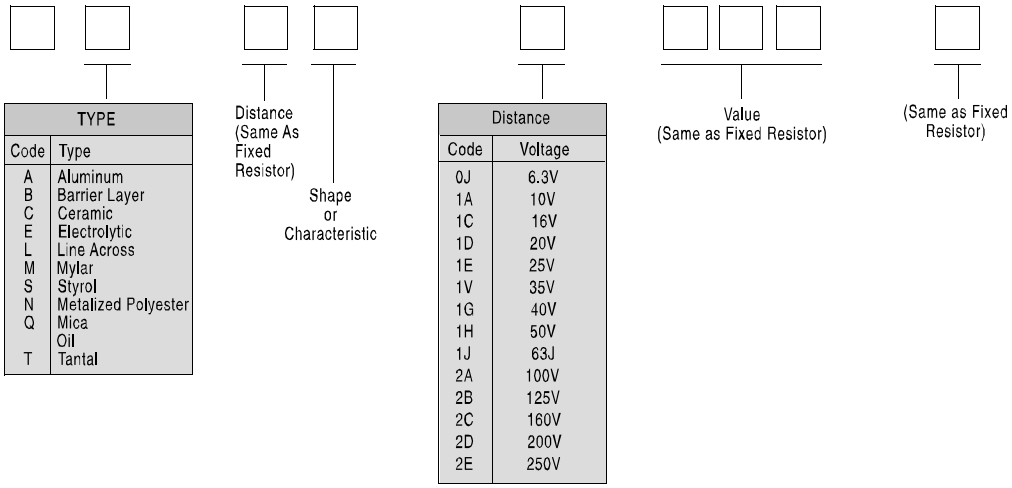
Pin Length

Value
(Same as Fixed Type)

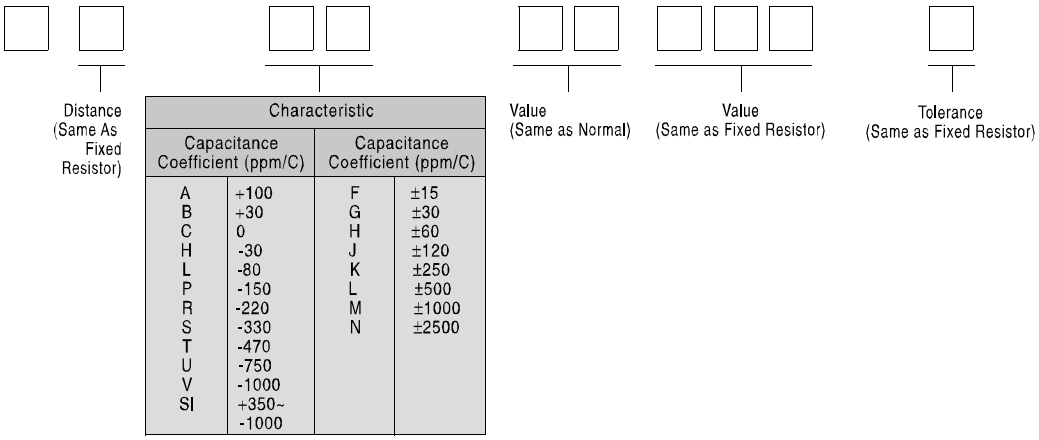
Knob
Type

RESISTOR CODING

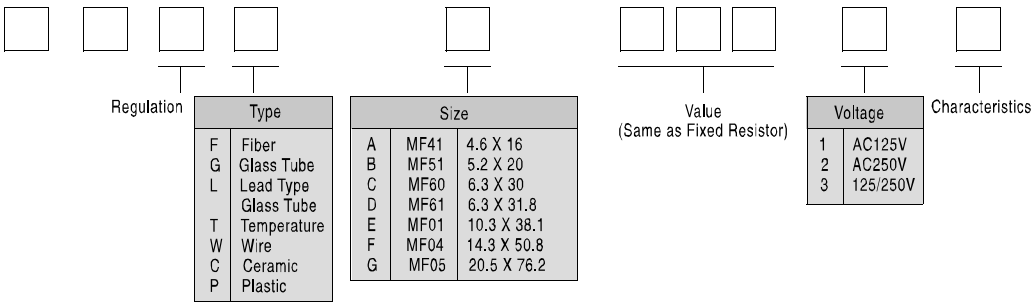
1 Normal



2 Temperature Compensation


Distance (Same As Fixed Resistor)
Characteristic
Capacitance Coefficient (ppm/C) | Capacitance Coefficient (ppm/C)
A +100 | F ±15
B +30 | G ±30
C 0 | H ±60
H -30 | J ±120
L -80 | K ±250
P -150 | L ±500
R -220 | M ±1000
S -330 | N ±2500
T -470
U -750
V -1000
SI +350~ -1000
Value (Same as Normal)
Value (Same as Fixed Resistor)
Tolerance (Same as Fixed Resistor)

FUSE CODING



2. ELECTRICAL PART LIST BY ASSEMBLIES

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
1+++	01	97PC0242C	PACKING AS	DV-S124NY-RJ
2++	C001	97P4925400	PAD F/B	EPS
2++	C002	97P5045900	BOX CARTON	EX225*K200*EX225
2++	C003	97P4808500	POLY BAG FOR SET	800*800*T0.5
2++	C004	97P4502200	LABEL SERIAL A	ART PAPER STICKER
2++	C005	6520010020	STAPPLE	M20
1+++	02	97PC0206A-	ACCESSORY AS	DV-S104NY-RJ
2++	D001	97P9560000	MANUAL OWNERS	ALL MODEL
2++	D002	97P880P815	CABLE RCA	3P-3P 1.5M
2++	D003	97P0424100	COVER ACCESSORY	LD-PE T0.1
2++	D004	97P7702800	PLUG DC CAR	DLP-1033A5
1+++	03	97PC0206C-	CHASSIS MAIN AS	DV-S104NY-RJ
2++	A001	97P0610410	CHASSIS MAIN	HI-PS(V0)
2++	A002	97P0800600	LEG	SBR 80 BLK
2++	A003	97P9340000	LABEL SPEC	PE FILM (ALL MODEL)
2++	A004	7173401211	SCREW TAPPTITE	TT2 BIN 4X12 MFZN
2++	A005	7173401212	SCREW TAPPTITE	TT2 BIN 4X12 BK
2++	A006	7173401211	SCREW TAPPTITE	TT2 BIN 4X12 MFZN
2++	A007	7003300611	SCREW MACHINE	BIN 3X6 MFZN FOR CD PCB
2++	A008	VT0C3-2322	LABEL CD	W/ADH PAPER T0.15X8X32
2++	A009	2233030000	LOCK PAINT	NO-2
2++	A010	97P9339000	LABEL CAUTION A	PE FILM T0.05
2++	A011	7173401211	SCREW TAPPTITE	TT2 BIN 4X12 MFZN
2++	A012	97P0471200	COVER TOP	SECC T0.5
2++	A013	97P0471310	COVER BOTTOM	SECC T0.4
2++	A014	97P9324002	LABEL FUSE	ART PAPER(STICKER)
2++	M001	97PP320660	PANEL FRONT AS	DV-S124NY-RJ
3+	B001	97P0318910	PANEL FRONT	HI-PS(V0)
3+	B003	97P1820800	DOOR F/L	ABS
3+	B004	97P3038000	SPRING F/L DOOR	SWPB 1082J
3+	B006	97P1358300	KNOB FUNCTION	ABS
3+	B007	97P1713400	INDICATOR DEW	GPPS
3+	B008	97P1622000	WINDOW REMO	PMMA
3+	B009	97P4217300	CUSHION DOOR	FELT T1.0
2++	M1000	97PC0211D-	DECK TOTAL AS	S1-MECHA
3+	AD001	97PA265131	DRUM PRICE AS	CYN-K312-SJ
2++	13	97PE101600	PCB MAIN AS	DV-S104NY-RJ
3+	C805	CEXF1V102V 79TD0635	C ELECTRO	35V RSS 1000MF (13X25) TP
3+	DL701	DSR5411H--	LED	SR-5411H (RED)
3+	DL702	DSRM5270A-	LED	SRM5270-A,DIPPUSION
3+	DL703	DSRM5270A-	LED	SRM5270-A,DIPPUSION
3+	DL704	DSRM5270A-	LED	SRM5270-A,DIPPUSION
3+	DL705	DSRM5270A-	LED	SRM5270-A,DIPPUSION

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
3+	DL706	DSRM5270A-	LED	SRM5270-A,DIPPUSION
3+	DL707	DSM5411H-	LED	SM-5411H (green)
3+	DL708	DSM5411H-	LED	SM-5411H (green)
3+	DL709	DSRM5270A-	LED	SRM5270-A,DIPPUSION
3+	D501	DS1R481T--	LED IR	SIR-48IT(P-RANK)
3+	D501A	97S2302200	HOLDER LED	ABS
3+	FH801	97P2332000	HOLDER FUSE AS	FH-51A
3+	F801	5F1GB2021M	FUSE GLASS TUBE	UL/CSA NM 2A 125V MF51
3+	H701	1TS0P1238X	IC UNIT R/RECEIVER	TSOP1238XG1 (38KHZ)
3+	IC302	1LC89962--	IC VIDEO	LC89962
3+	IC401	1LA70020--	IC PRE-AMP	LA70020
3+	IC502	1BA6209---	IC	BA6209
3+	IC504	1MC4558C--	IC OP AMP	MC4558C(KA4558)
3+	IC801	1K1A7806P1	IC REGULATOR	KIA7806PI
3+	IC802	1PQ12RF11-	IC REGULATOR	PQ12RF11
3+	JK601	97P6314800	JACK PIN	DPAM-9801
3+	JK602	97P6315100	JACK DIN	DUAZ-9802
3+	JK801	97P6310800	JACK DC	YSC-1535
3+	JK802	97P62A0144	CONN WAFER	770968-1,4PIN,DUAL
3+	M401	97PB239600	CASE PREAMP AS	DV-S104N
4+	M401A	97P0473900	CASE SHI PREAMP	ET T0.3
4+	M401B	97P0983200	PLATE EARTH-D	SUS 304 CSP T0.15
3+	M402	97P0473700	COVER SHI P/A	ET T0.3
3+	M403	97P0720760	BOARD ANT	DV-S124NY-RJ
3+	M601A	7175301012	SCREW TAPPTITE	TT2 FLT 3X10 MFZN BK
3+	M701	97P2345000	HOLDER LED F	ABS
3+	M801A	97P4408100	RADIATOR TR	AL UL/CSA
3+	M801B	7173300811	SCREW TAPPTITE	TT2 BIN 3X8 MFZN
3+	PJ201	97P885X091	CONN AS	6H-4S,120MM
3+	PJ801	97P885X003	CONN AS	2S-2T 140
3+	PT01	97P6269100	CONN WAFER	00-8283-0712-00000
3+	P401	97P62Y0847	CONN FPC	FCZ 125L(BLUE15MM)-07P
3+	P501	97P62T112A	CONN B/B (PLUG)	TKC-GP PLUG 10P
3+	P502	97P62T1126	CONN B/B (PLUG)	TKC-GP PLUG 6P
3+	P503	97P62T13B2	CONN BIB	TMC-A,S0CKET,2.0MM,2P
3+	P504	97P62T12A5	CONN BIB	TAS-X,RECEP2.5MM,5P
3+	P505	97P6268600	CONN WAFER	00-8283-0212-00000
3+	S501	97P0S01300	SENSOR REEL	RPI-244
3+	S501A	97S2302100	HOLDER REEL SENSOR	POM
3+	S502	97P0S01300	SENSOR REEL	RPI-244
3+	S502A	97S2302100	HOLDER REEL SENSOR	POM
3+	S503	TRPT38PB3F	TR PHOTO	RPT-38PB3F
3+	S503A	97P2342100	HOLDER P/T	ABS(HF-06601)

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
3+	S504	TRPT38PB3F	TR PHOTO	RPT-38PB3F
3+	S504A	97P2342100	HOLDER P/T	ABS(HF-06601)
3+	S505	97P0S02000	SENSOR DEW	HDP-05-A8
3+	X301	5XE3R579AB	CRYSTAL QUARTZ	HC-49/U 3.579545MHZ 15PPM
3+	X501	5XJ8R000UE	CRYSTAL QUARTZ	HC-49/S 8.000000MHZ 30PPM
3+	23	97PB239200	PCB MAIN CHIP AS	DV-S104NY-RJ
4+	C201	HCLK821JCA	C CHIP CERA	50V SL 820PF J 2012
4+	C204	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
4+	C213	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
4+	C261	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C266	HCLK681JCA	C CHIP CERA	50V SL 680PF J 2012
4+	C303	HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012
4+	C304	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C306	HCLK300JCA	C CHIP CERA	50V SL 30PF J 2012
4+	C308	HCLK270JCA	C CHIP CERA	50V SL 27PF J 201
4+	C311	HCLK201JCA	C CHIP CERA	50V SL 200PF J 2012
4+	C312	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
4+	C324	HCLK390JCA	C CHIP CERA	50V SL 39PF J 2012
4+	C325	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
4+	C327	HCLK100CCA	C CHIP CERA	50V SL 10PF C 2012
4+	C331	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
4+	C352	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 201
4+	C353	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C402	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
4+	C454	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
4+	C501	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
4+	C504	HCQK120JCA	C CHIP CERA	50V CH 12PF J 2012
4+	C505	HCQK120JCA	C CHIP CERA	50V CH 12PF J 2012
4+	C506	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C510	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C511	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C512	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C520	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C521	HCFK223ZCA	C CHIP CERA	50V Y5V 0.022MF Z 2012
4+	C522	HCLK151JCA	C CHIP CERA	50V SL 150PF J 2012
4+	C523	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
4+	C529	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C530	HCQK120JCA	C CHIP CERA	50V CH 12PF J 2012
4+	C531	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C532	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C533	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C603	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
4+	C701	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
4+	IC251	1TA1246F--	IC HI-FI	TA1246F
4+	IC301	1LA71004M-	IC AV ONE CHIP	LA71004M
4+	IC501	199KS1ZNSS	IC MICOM	KS88C8016
4+	RJ001	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ002	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ003	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ004	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ005	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ006	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ007	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ008	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ011	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ012	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ013	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ014	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	RJ020	HRF8000-EA	R CHIP	1/8 0 OHM 3216
4+	R206	HRFT273JCA	R CHIP	1/10 27K OHM J 2012
4+	R207	HRFT201JCA	R CHIP	1/10 200 OHM J 2012
4+	R208	HRFT334JCA	R CHIP	1/10 330K OHM J 2012
4+	R209	HRFT123JCA	R CHIP	1/10 12K OHM J 2012
4+	R210	HRFT752JCA	R CHIP	1/10 7.5K OHM J 2012
4+	R211	HRFT123JCA	R CHIP	1/10 12K OHM J 2012
4+	R215	HRFT132JCA	R CHIP	1/10 1.3K OHM J 2012
4+	R256	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
4+	R301	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
4+	R302	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
4+	R304	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
4+	R305	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
4+	R306	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012
4+	R307	HRFT155JCA	R CHIP	1/10 1.5M OHM J 2012
4+	R309	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
4+	R310	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
4+	R311	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012
4+	R312	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012
4+	R506	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
4+	R507	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
4+	R508	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
4+	R525	HRFT274JCA	R CHIP	1/10 270K OHM J 2012
4+	R526	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
4+	R527	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
4+	R538	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
4+	R541	HRFT273JCA	R CHIP	1/10 27K OHM J 2012
4+	R543	HRFT273JCA	R CHIP	1/10 27K OHM J 2012

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
4+	R549	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
4+	R604	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
4+	R717	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
4+	R801	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
4+	33	97PC313400	PCB MAIN R-AUTO AS	DV-S104NY-RJ
5+	C203	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP
5+	C205	CEXF1A470A 79TD0755	C ELECTRO	10V RSM 47MF 5X7
5+	C206	CEXF1A470A 79TD0755	C ELECTRO	10V RSM 47MF 5X7
5+	C207	CMXM2A472J	C MYLAR	100V 4700PF J (TP)
5+	C208	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
5+	C211	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C212	CMXM2A103J 79TD1387	C MYLAR	100V 0.01MF J (TP)
5+	C214	CMXM2A102J	C MYLAR	100V 1000PF J (TP)
5+	C252	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C253	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C255	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C257	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C258	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C262	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
5+	C263	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C264	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
5+	C265	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
5+	C267	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C268	CMXM2A122J 79TD1827	C MYLAR	100V 1200PF J (TP)
5+	C269	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C270	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C273	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 5X7
5+	C274	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
5+	C278	CEXF1E220A	C ELECTRO	25V RSM 22MF 6.3X7
5+	C279	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP
5+	C301	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C310	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C313	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C314	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
5+	C316	CEXF1A101A	C ELECTRO	10V RSM 100MF 6.3X7
5+	C318	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP
5+	C319	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C321	CEXF1E220A	C ELECTRO	25V RSM 22MF 6.3X7
5+	C322	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C323	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C351	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP
5+	C355	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C356	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
5+	C401	CEXF1A101A	C ELECTRO	10V RSM 100MF 6.3X7
5+	C502	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C503	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
5+	C509	CEXF1A470A 79TD0755	C ELECTRO	10V RSM 47MF 5X7
5+	C515	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
5+	C517	CEXF1A470A 79TD0755	C ELECTRO	10V RSM 47MF 5X7
5+	C518	CEXF1A470A 79TD0755	C ELECTRO	10V RSM 47MF 5X7
5+	C527	CEXF1A470A 79TD0755	C ELECTRO	10V RSM 47MF 5X7
5+	C540	CEXF1A470A 79TD0755	C ELECTRO	10V RSM 47MF 5X7
5+	C601	CEXF1A471V	C ELECTRO	10V RSS 470MF 8X11.5
5+	C602	CEXF1E470V	C ELECTRO	25V RSS 47MF (5X11) TP
5+	C606	CMXM2A472J	C MYLAR	100V 4700PF J (TP)
5+	C607	CMXM2A472J	C MYLAR	100V 4700PF J (TP)
5+	C801	CEXF1E470V	C ELECTRO	25V RSS 47MF (5X11) TP
5+	C803	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP
5+	C807	CEXF1E220A	C ELECTRO	25V RSM 22MF 6.3X7
5+	C808	CEXF1E101V 79TD1927	C ELECTRO	25V RSS 100MF (6.3X11) TP
5+	IC503	1K1A7042P-	79TD1408 IC SWITCH	KIA7042P
5+	L201	5CPX101J2T	COIL PEAKING	100UH(BRN-BRN)
5+	L251	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
5+	L252	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
5+	L301	5CPX680J2T	COIL PEAKING	68UH(BLU-BLK)
5+	L302	5CPX339J2T	COIL PEAKING	3.3UH(ORAN ---)
5+	L303	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
5+	L351	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
5+	L451	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
5+	L601	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
5+	Q251	TZRC104M--	TR	KRC104M AUTO
5+	Q301	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
5+	Q302	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
5+	Q351	TZTA1266Y-	TR	KTA1266Y- (AUTO)(1015Y)
5+	Q501	TZSR2002--	TR	KSR2002 (AUTO)
5+	Q601	TZTA1266Y-	TR	KTA1266Y- (AUTO)(1015Y)
5+	Q620	TZTA1266Y-	TR	KTA1266Y- (AUTO)
5+	Q701	TZRC104M--	TR	KRC104M AUTO
5+	Q702	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
5+	Q801	TZTA1273Y-	TR	KTA1273Y(966Y)
5+	Q802	TZRC104M--	TR	KRC104M AUTO
5+	Q803	TZRC104M--	TR	KRC104M AUTO
5+	Q804	TZRC104M--	TR	KRC104M AUTO
5+	Q805	TZTA1273Y-	TR	KTA1273Y(966Y)
5+	Q806	TZRC104M--	TR	KRC104M AUTO
5+	Q807	TZTC3205Y-	TR	KTC3205Y (2236Y)

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
5+	RV591	RV5426104M	R SEMI FIXED	H100K-5X3-6Y-PC-MS
5+	SW701	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
5+	SW702	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
5+	SW703	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
5+	SW704	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
5+	SW705	5S50101Z9	SW TACT	SKHV10914B 9.5M AUTO
5+	43	97PA495700	PCB MAIN A-AUTO AS	DV-S104NY-RJ
6+	C251	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C254	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C256	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C271	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C275	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C302	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C305	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C307	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C315	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
6+	C330	CCZF1H473Z	C CERA	50V F 0.047MF Z
6+	C354	CCZB1H101K	C CERA	50V B 100PF K
6+	C508	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C513	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
6+	C514	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
6+	C516	CCZB1H101K	C CERA	50V B 100PF K
6+	C524	CCZF1H223Z	C CERA	HIKF 50V 0.022MF Z DD380
6+	C525	CCZB1H102K	C CERA	50V B 1000PF K
6+	C526	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C528	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C541	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
6+	C542	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C543	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C544	CCZB1H102K	C CERA	50V B 1000PF K
6+	C545	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C546	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
6+	C547	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
6+	C548	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C702	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C804	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	C806	CCZF1H103Z 79TD1664	C CERA	50V F 0.01MF Z
6+	D301	DZN4148---	DIODE	1N4148 AUTO 52MM
6+	D302	DZN4148---	DIODE	1N4148 AUTO 52MM
6+	D503	DZZ9R1BM--	DIODE ZENER	UZ-9.1BM AUTO
6+	D505	DZN4148---	DIODE	1N4148 AUTO 52MM
6+	D506	DZZ6R2BM--	DIODE ZENER	UZ6.2BM (AUTO)
6+	D507	DZZ7R5BM--	DIODE ZENER	UZ-7.5BM

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
6+	D601	DZN4148---	DIODE	1N4148 AUTO 52MM
6+	D701	DZN4148---	DIODE	1N4148 AUTO 52MM
6+	D801	DZN4003---	DIODE	IN4003(DAEBO)
6+	D802	DZN4003---	DIODE	IN4003(DAEBO)
6+	D803	DZUZ18BSC-	DIODE ZENER	UZ-18BSC(17.51-18.30)
6+	D804	DZN4003---	DIODE	IN4003(DAEBO)
6+	D805	DZN4003---	DIODE	IN4003(DAEBO)
6+	D806	DZN4148---	DIODE	1N4148 AUTO 52MM
6+	D807	DZN4003---	DIODE	IN4003(DAEBO)
6+	D808	DZZ9R1BM--	DIODE ZENER	UZ-9.1BM AUTO
6+	D809	DZN4148---	DIODE	1N4148 AUTO 52MM
6+	JP001	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP002	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP003	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP004	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP005	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP006	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP007	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP008	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP009	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP010	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP011	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP012	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP013	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP014	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP015	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP016	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP017	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP018	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP019	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP020	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP021	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP022	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP023	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP024	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP025	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP026	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP027	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP028	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP029	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP030	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP031	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP032	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
6+	JP033	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP034	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP035	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP036	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP037	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP038	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP039	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP040	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP041	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP042	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP043	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP044	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP045	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP046	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP047	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP048	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP049	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP050	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP051	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP052	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP053	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP054	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP055	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP056	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP057	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP058	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP059	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP060	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP061	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP062	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP063	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP064	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP065	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP066	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP067	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP068	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP069	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP070	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP071	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP072	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP073	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP074	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP075	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
6+	JP076	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP077	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP078	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP079	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP080	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP081	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP082	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP083	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP084	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP085	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP086	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP087	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP088	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP089	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP090	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP091	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP093	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP094	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP095	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP096	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP097	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP098	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP099	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP100	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP101	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP102	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP103	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP104	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP105	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP106	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP107	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP108	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP109	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP110	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP111	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP112	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP113	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP114	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP115	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP116	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP117	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP118	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP119	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
6+	JP120	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP121	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP122	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP123	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP124	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP125	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP126	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP128	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP129	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP130	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP131	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP132	85801065GY	WIRE COPPER	AAWG22 1/0.65 TIN COATING
6+	JP133	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP134	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP135	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP136	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP139	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP140	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP141	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP143	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP144	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP145	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP146	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP147	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP148	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	JP149	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
6+	L801	5PB13857--	COIL BEAD	BI3857(AXIAL)
6+	R214	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J
6+	R251	RD-AZ271J- 79TD1548	R CARBON FILM	1/6 270 OHM J
6+	R252	RD-AZ271J- 79TD1548	R CARBON FILM	1/6 270 OHM J
6+	R253	RD-AZ222J- 79TD0137	R CARBON FILM	1/6 2.2K OHM J
6+	R254	RD-AZ222J- 79TD0137	R CARBON FILM	1/6 2.2K OHM J
6+	R257	RD-AZ471J- 79TD0412	R CARBON FILM	1/6 470 OHM J
6+	R258	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R259	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J
6+	R260	RD-AZ333J- 79TD0096	R CARBON FILM	1/6 33K OHM J
6+	R261	RD-AZ123J- 79TD0104	R CARBON FILM	1/6 12K OHM J
6+	R262	RD-AZ562J- 79TD2036	R CARBON FILM	1/6 5.6K OHM J
6+	R308	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R351	RD-AZ824J- 79TD0113	R CARBON FILM	1/6 820K OHM J
6+	R352	RD-AZ222J- 79TD0137	R CARBON FILM	1/6 2.2K OHM J
6+	R401	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R452	RD-AZ473J- 79TD2034	R CARBON FILM	1/6 47K OHM J

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
6+	R501	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R504	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R505	RD-AZ470J- 79TD0621	R CARBON FILM	1/6 47 OHM J
6+	R509	RD-AZ182J- 79TD0167	R CARBON FILM	1/6 1.8K OHM J
6+	R510	RD-AZ182J- 79TD0167	R CARBON FILM	1/6 1.8K OHM J
6+	R511	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J
6+	R512	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J
6+	R513	RD-AZ132J- 79TD1442	R CARBON FILM	1/6 1.3K OHM J
6+	R514	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R515	RD-AZ473J- 79TD2034	R CARBON FILM	1/6 47K OHM J
6+	R516	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R517	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R518	RD-AZ332J- 79TD0094	R CARBON FILM	1/6 3.3K OHM J
6+	R519	RD-AZ153J- 79TD2022	R CARBON FILM	1/6 15K OHM J
6+	R520	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R521	RD-AZ473J- 79TD2034	R CARBON FILM	1/6 47K OHM J
6+	R522	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J
6+	R523	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R524	RD-AZ474J- 79TD0881	R CARBON FILM	1/6 470K OHM J
6+	R528	RD-AZ562J- 79TD2036	R CARBON FILM	1/6 5.6K OHM J
6+	R529	RD-AZ473J- 79TD2034	R CARBON FILM	1/6 47K OHM J
6+	R530	RD-AZ912J- 79TD0590	R CARBON FILM	1/6 9.1K OHM J
6+	R531	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J
6+	R532	RD-AZ752J- 79TD0099	R CARBON FILM	1/6 7.5K OHM J
6+	R533	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J
6+	R534	RD-AZ105J- 79TD0092	R CARBON FILM	1/6 1M OHM J
6+	R535	RD-AZ752J- 79TD0099	R CARBON FILM	1/6 7.5K OHM J
6+	R536	RD-AZ221J- 79TD0111	R CARBON FILM	1/6 220 OHM J
6+	R537	RD-AZ473J- 79TD2034	R CARBON FILM	1/6 47K OHM J
6+	R539	RD-AZ101J- 79TD0106	R CARBON FILM	1/6 100 OHM J
6+	R540	RD-AZ333J- 79TD0096	R CARBON FILM	1/6 33K OHM J
6+	R542	RD-AZ201J- 79TD0894	R CARBON FILM	1/6 200 OHM J
6+	R544	RD-AZ201J- 79TD0894	R CARBON FILM	1/6 200 OHM J
6+	R545	RD-AZ304J- 79TD1565	R CARBON FILM	1/6 300K OHM J
6+	R546	RD-AZ361J- 79TD0875	R CARBON FILM	1/6 360 OHM J
6+	R547	RD-AZ361J- 79TD0875	R CARBON FILM	1/6 360 OHM J
6+	R548	RD-AZ304J- 79TD1565	R CARBON FILM	1/6 300K OHM J
6+	R550	RD-AZ101J- 79TD0106	R CARBON FILM	1/6 100 OHM J
6+	R551	RD-AZ101J- 79TD0106	R CARBON FILM	1/6 100 OHM J
6+	R552	RD-AZ332J- 79TD0094	R CARBON FILM	1/6 3.3K OHM J
6+	R554	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R555	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J
6+	R556	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
6+	R557	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R558	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R559	RD-AZ473J- 79TD2034	R CARBON FILM	1/6 47K OHM J
6+	R560	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J
6+	R601	RD-4Z391J- 79TD0587	R CARBON FILM	1/4 390 OHM J
6+	R603	RD-AZ750J- 79TD0883	R CARBON FILM	1/6 75 OHM J
6+	R607	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R608	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R611	RD-AZ750J- 79TD0883	R CARBON FILM	1/6 75 OHM J
6+	R620	RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
6+	R621	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
6+	R622	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
6+	R701	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R702	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R703	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R704	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R705	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R706	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J

LVL	LOC	PART-CODE	PART-NAME	PART-DESC
6+	R707	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R708	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R709	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R710	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R711	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J
6+	R712	RD-AZ161J-	R CARBON FILM	1/6 160 OHM J
6+	R713	RD-AZ221J- 79TD0111	R CARBON FILM	1/6 220 OHM J
6+	R714	RD-AZ511J- 79TD0151	R CARBON FILM	1/6 510 OHM J
6+	R716	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R718	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
6+	R719	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R720	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J
6+	R721	RD-AZ331J- 79TD0122	R CARBON FILM	1/6 330 OHM J
6+	R802	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J
6+	R803	RD-AZ202J- 79TD0163	R CARBON FILM	1/6 2K OHM J
6+	R804	RD-AZ361J- 79TD0875	R CARBON FILM	1/6 360 OHM J
6+	R805	RD-AZ202J- 79TD0163	R CARBON FILM	1/6 2K OHM J
6+	R806	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J

DESCRIPTION OF THE MECHANISM

1. CHARACTERISTIC OF THE S1-MECHA MECHANISM

1 The S1-MECHA Deck satisfies both the VHS and NTSC/PAL specifications.

2 The S1-MECHA Deck consists of three motors such as Drum Motor, Capstan Motor and L/C Motor.

3 The Front Loading of the S1-MECHA Deck is operated by the power of L/C Motor.

4 S1-MECHA Deck System consists of Five operating Modes such as EJECT, FF/REW, BRAKE/STOP, REVIEW, and PLAY/CUE/RECORD Mode. And each mode has a 4bits mode signal, which is judged by the CAM switch which the L/C motor operates.

5 The cassette-in driving of the S1-Mecha Deck undergoes a process as follows.
- When a cassette is inserted, F/L Drive Rack falls out.
- MICOM recognizes a point of time when the light is transmitted at the Start Sensor.
- MICOM let L/C Motor drive via Motor Drive IC.

6 S1-MECHA Deck forces REEL to operate on the FF/REW mode and in case of other modes, it operates the REEL SLIP.

7 In the FF/REW mode, S1-MECHA Deck should be operated under the unloading position to protect cassette tapes.

8 S1-MECHA Deck eliminated the deck PCB and directly connects the main PCB with the 4 main parts (Drum motor, Capstan motor, L/C motor, Cam Switch) by using the board to board type connector.

2. DESCRIPTION OF THE MODES

2-1. EJECT MODE

A. By rotating the L/C motor that runs the front loading to clockwise and counter-clockwise direction, the EJECT mode conducts the cassette-in/out operations.

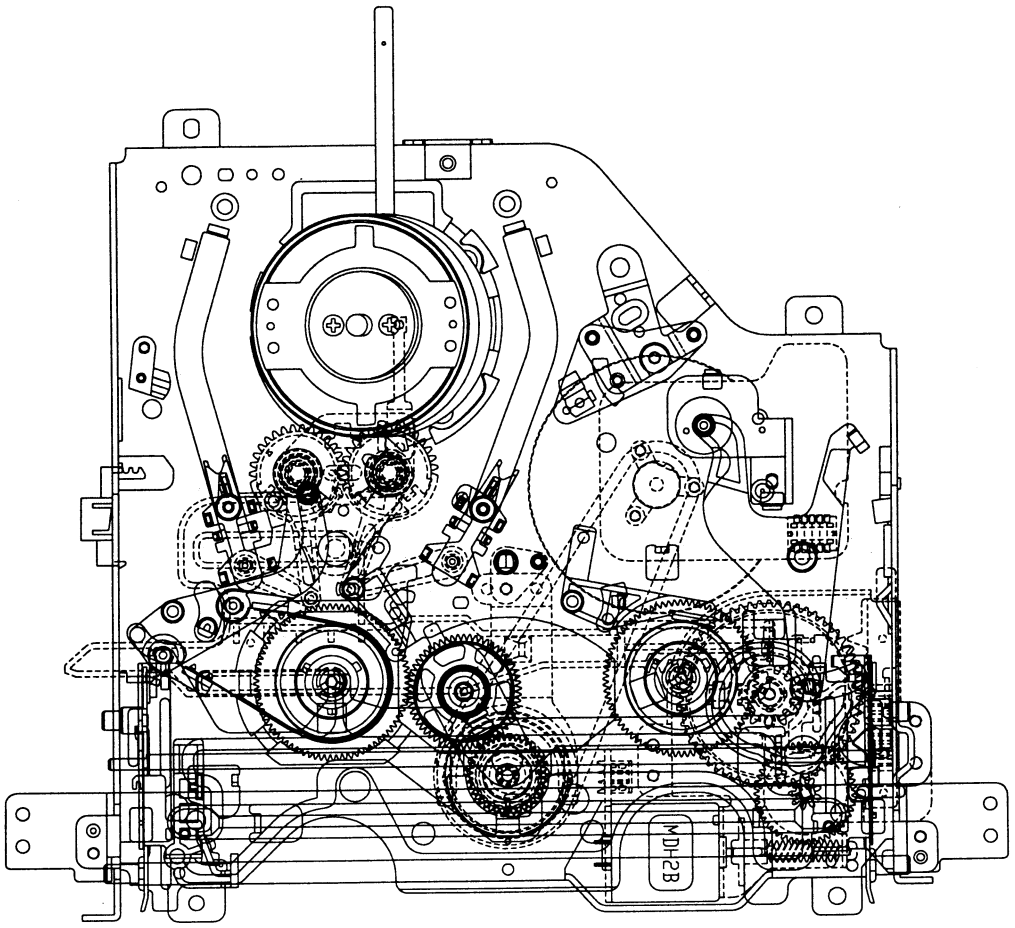
- Cassette-in operation: When a cassette is inserted with an adequate pressure, F/L Drive Rack falls out. And the cassette-in driving starts on the point of time when the light is transmitted at the Start Sensor. If there is no safety tab in a cassette, the Deck mode transfers to the Playback mode.
- The cassette-out operation: The Cassette Holder Assembly is located at the entrance of the Front Panel, and it only conducts the cassette in operation, when the Cassette Holder Assembly will be locked by the safety lever-R/L in order to protect the cassette tapes.

B. The configuration of appliances

a. The Band Brake is separated from the S-Reel Table.

b. The S/T Sub Brake is attached to the S/T-Reel Table.

c. The Idler Gear is attached to the S-REEL Table.



EJECT MODE

2-2. FF/REW MODE

A. This is the mode that conducts the fast forward winding and rewinding of tape by rotating the Capstan Motor at high speed to the clockwise and counter-clockwise direction and running the Reel Table.

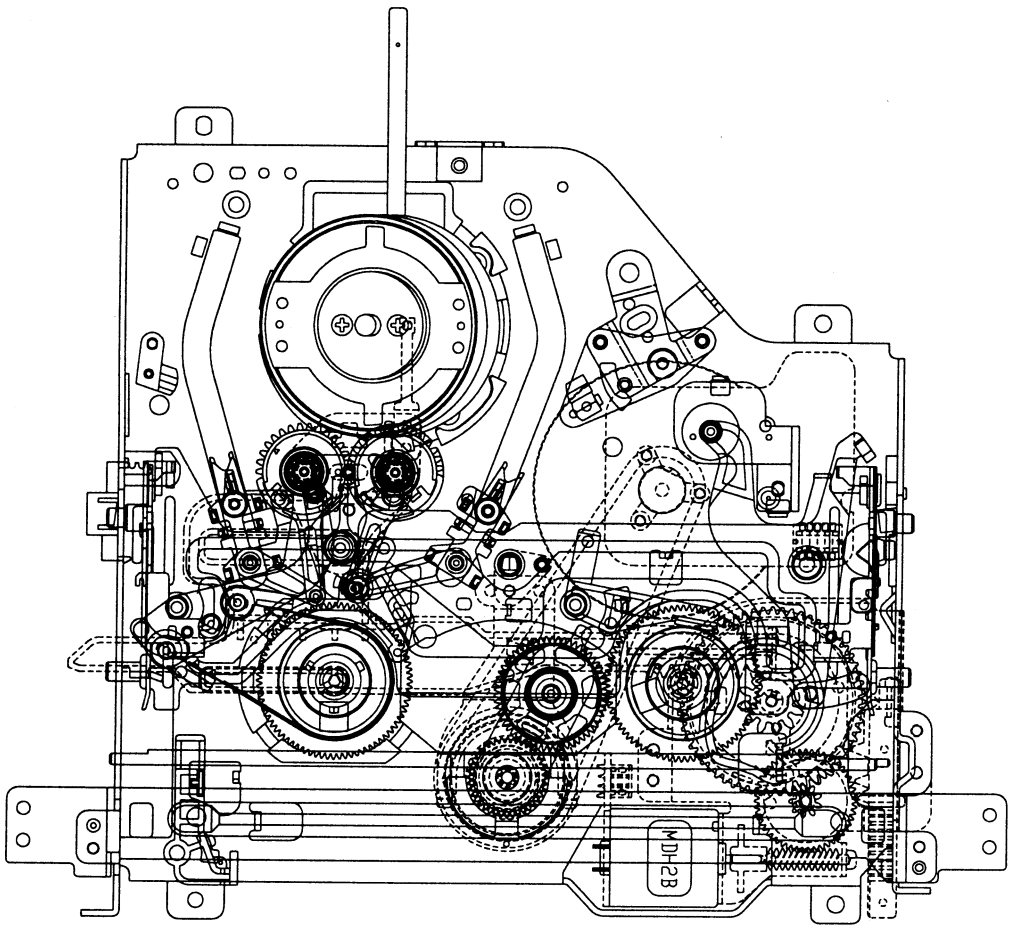
- The BRAKE mode works when the END/START sensor is on during the FF/REW operation, and it conducts the review and cue operation temporarily.
- The FF/REW mode conducts Direct operation, and when the deck stops, it transfers to the BRAKE mode.

B. The configuration of appliances

a. The S/T slant pole assembly is in the unloading condition.

b. The Band Brake is separated from the S-Reel Table.

c. The S/T Sub Brake is attached from the S/T Reel Table.



FF/REW MODE

2-3. BRAKE/STOP MODE

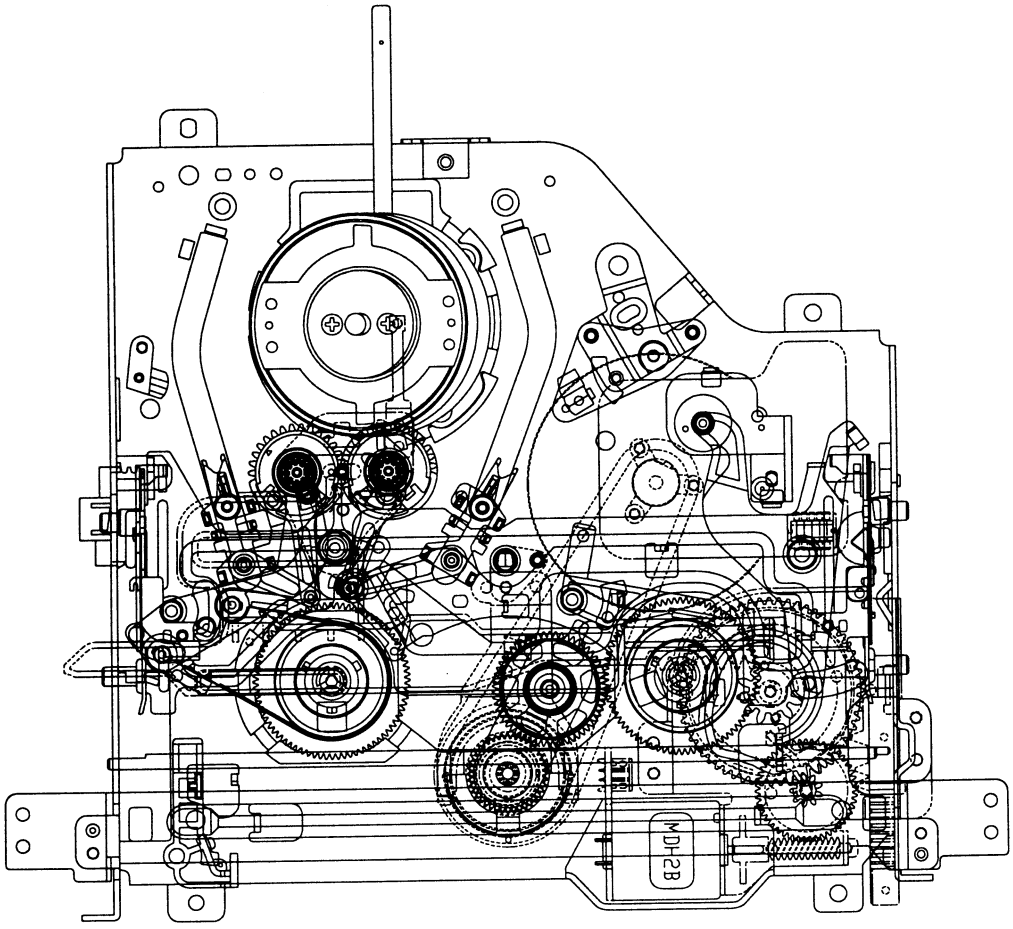
A. The BRAKE mode is configured between the FF/REW mode and the Loading section. When the PLAY, STOP or EJECT button is pushed during FF/REW, S/T-Reel Table stops immediately so that it prevents the loosening of cassette tape by the law of inertia. Therefore the BRAKE mode becomes the criteria of the unloading location when the power is off.

B. The STOP mode can be used when you want to stop the operation of tape during the playback of a cassette tape or recording, which is the waiting point of the Key-in for the next operation.

- When you insert a cassette tape with a safety tab, it goes to the STOP mode.
  However, it can also move to the BRAKE mode according to the MICOM program.

C. The configuration of appliances

a. The S/T Slant Pole Assembly is in the unloading condition.
b. The Band Brake is separated from the S-Reel Table.
c. The S/T Sub Brake is attached to the S/T Reel Table.
d. The Tension Pole and the Pinch Roller are in the initial position.

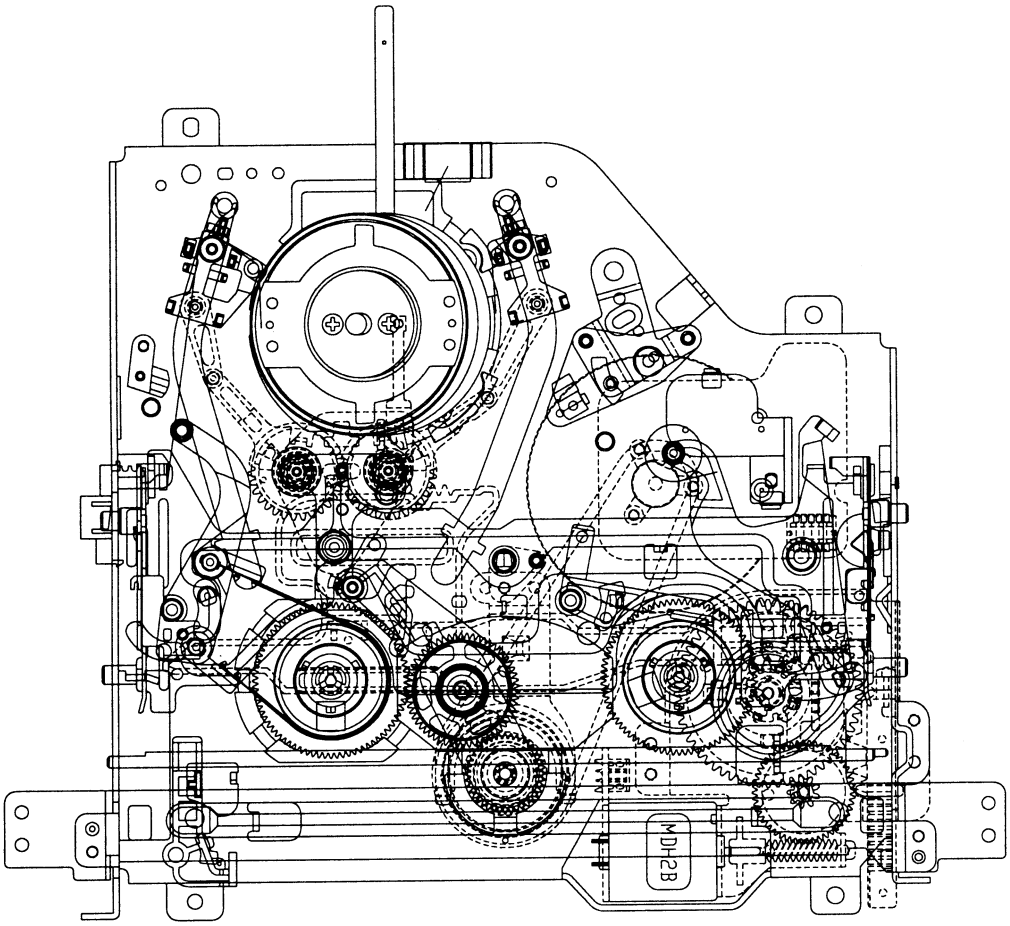


BRAKE/STOP MODE

2-4. REVIEW MODE

A. This mode is obtained by pressing the REW button in the state of Playback. L/C motor rotates and CAM S/W mode transfers to REVIEW mode and Capstan Motor rotates backward with a fixed speed.
At this time, a cassette transits backward similarly.

B. The configuration of appliances
a. The tension pole is in the given location.
b. The band brake is separated from the S-Reel Table.
c. The S-Sub Brake is separated from the S-Reel Table.
d. The T-Sub Brake is attached to the T-Reel Table.
e. The Pinch Roller is attached to the Capstan Shaft.



REVIEW MODE

2-5. PLAY/CUE/RECORD MODE

A. The PLAY/CUE/RECORD mode performs the playback and recording while moving the tape from the S-Reel Table to the T-Reel Table at a constant speed.

- When the Slow function is added, it can run at the PLAY mode.

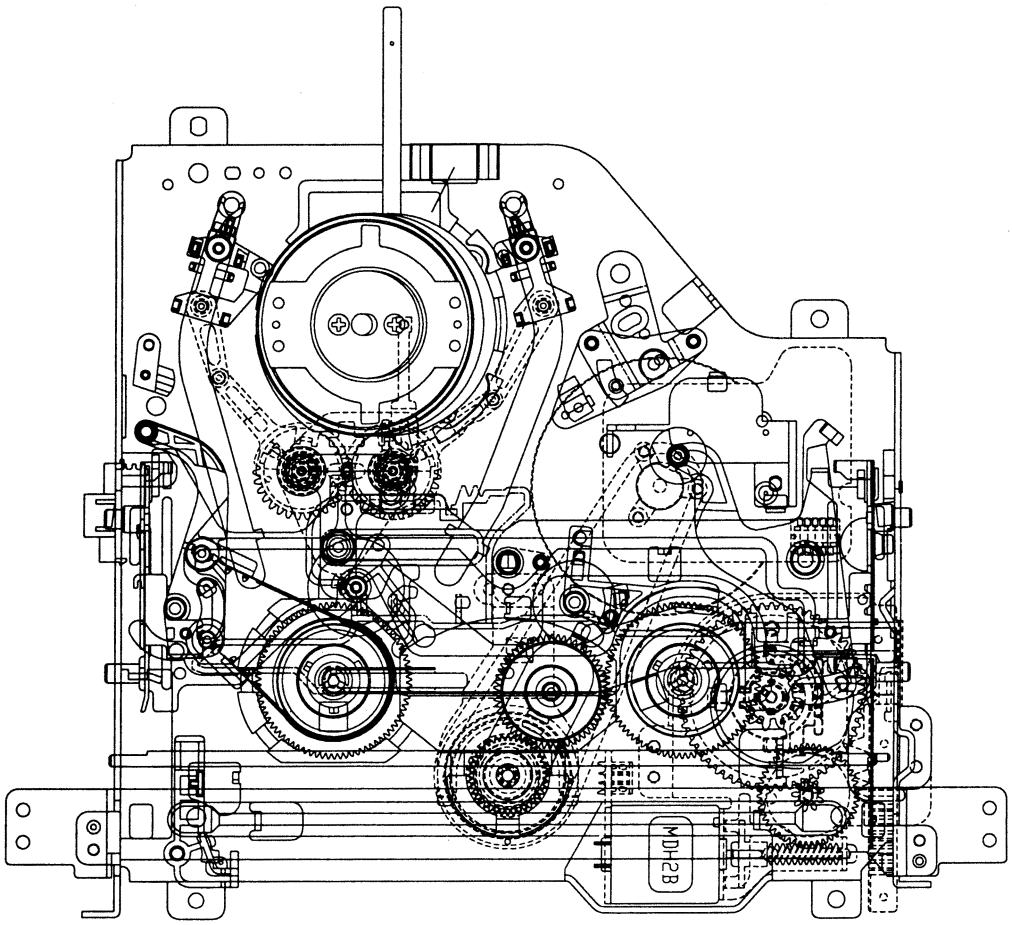
B. The configuration of appliances

a. The Tension Pole is in the given location.

b. The Band Brake is attached to the S-Reel Table to perform the Tension SERVO.

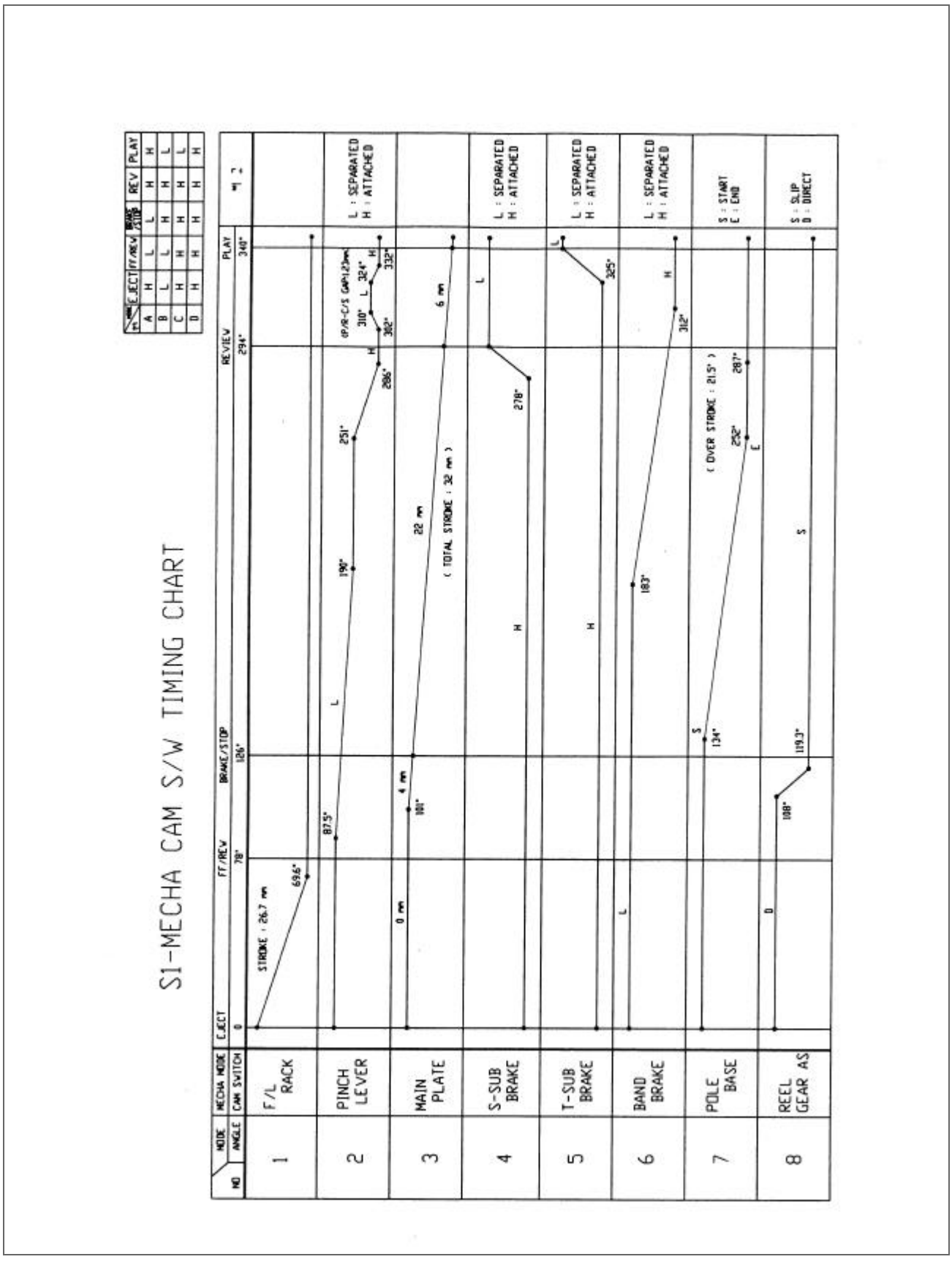
c. The S/T-Sub Brake is separated from S/T-Reel Table.

d. The Pinch Roller is attached to the Capstan Shaft.



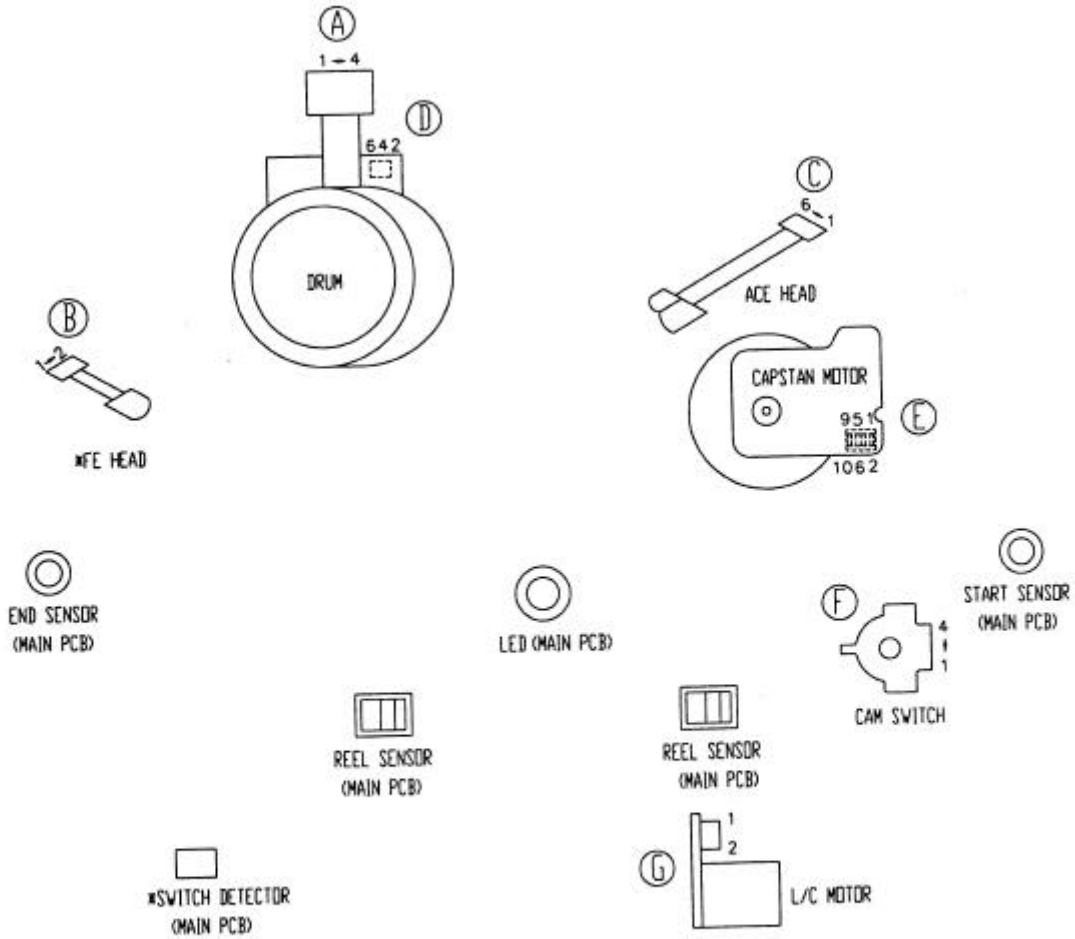
PLAY/CUE/RECORD MODE

3. TIMING CHART OF S1-MECHA MECHANISM



4. S1-MECHA DECK WIRE DIAGRAM

4-1. WIRE DIAGRAM



* APPLIED TO ONLY RECORD MODEL (Ⓑ:ITEM)

(Ⓑ: INTEM IS DELETED AT VCP MODEL)

4-2. CONNECTOR PIN ARRANGEMENT

A. DRUM HEAD
(2HEAD MODEL)

1	VR1
2	COMMON
3	VL1
4	GND

B. FE HEAD

1	FE HEAD
2	GND

C. ACE HEAD

1	CTL HEAD (+)
2	CTL HEAD (-)
3	AUDIO HEAD
4	AUDIO HEAD
5	GND
6	AUDIO ERASE

D. DRUM MOTOR

1	VCC (12V)
2	CONTROL
3	PG OUT
4	NONCONNECT
5	GND
6	FG OUT

E. CAPSTAN MOTOR

1	VCC (5V)
2	F/R
3	FG-OUT
4	CTL-Ref
5	CTL
6	I-LIMIT
7	VCC (12V)
8	GND
9	IC GND
10	NONCONNECT

F. CAM SWITCH

1	CAM A
2	CAM B
3	CAM C
4	CAM D (GND)

G. L/C MOTOR

A	L/C M/T (+)
B	L/C M/T (-)

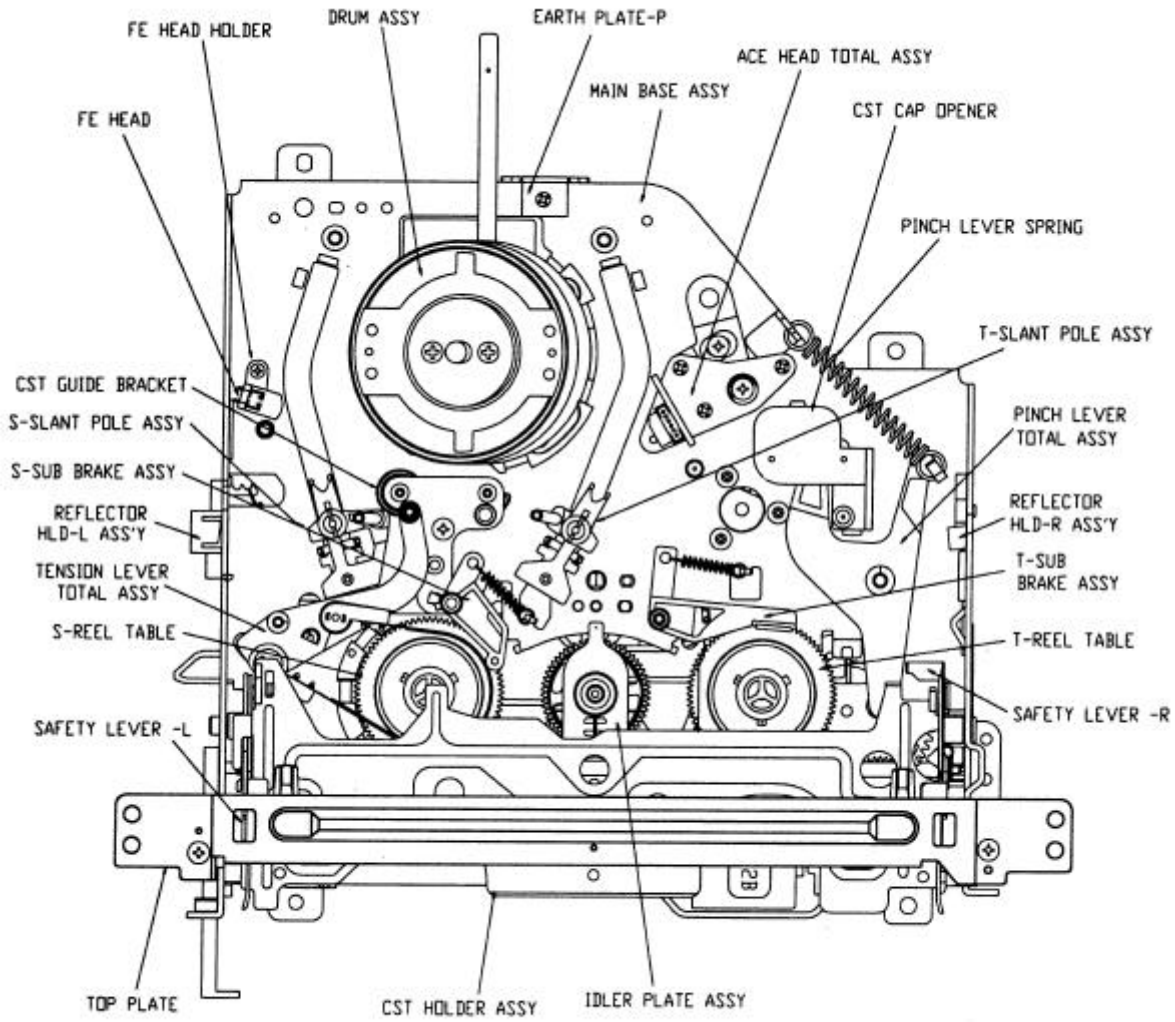
*** (B) ITEM IS DELETED AT VCP MODEL**

MAINTENANCE AND CHECKING OF MAJOR SYSTEM

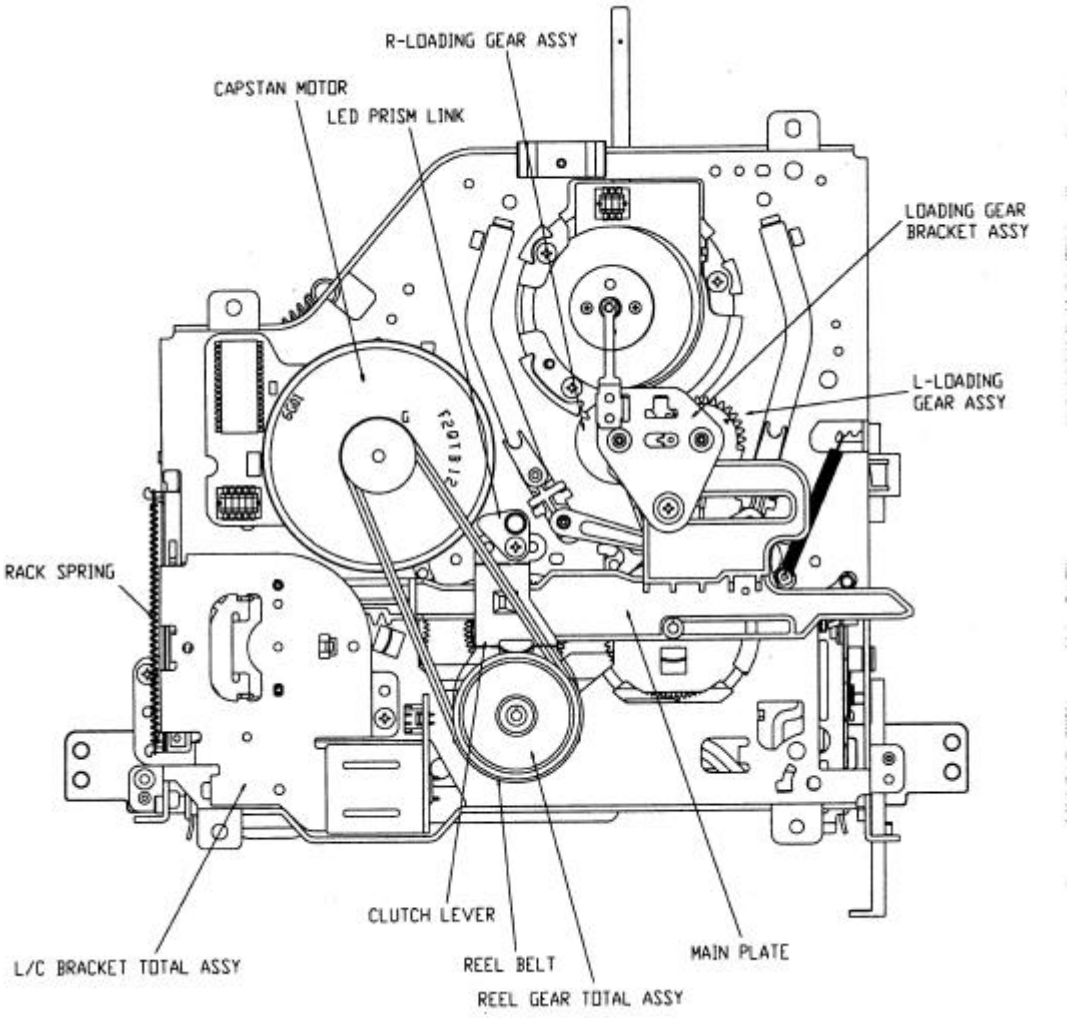
1. NAMES OF MAJOR PARTS AND AREA

1-1. ASSEMBLING DIAGRAM OF DECK

A. Deck Top View



B. Deck Bottom View



2. MAINTENANCE AND PERIODIC CHECKING LIST

2-1. MAINTENANCE AND GENERAL INFORMATION

A. To guarantee the perfect performance and the function of S1-MECHA Deck and also to use the tape for the long life, you should conduct the periodic maintenance and checking.
- Replacement after checking
- Conduct replacement and checking without regard to the time used.

B. Cleaning of the rotary Head Drum
- To clean the rotary Head Drum, wet a towel with non-water added alcohol to clean the surface of the Drum gen tly while rotating the Head Drum Assembly by hands slowly. (Warning: Do not clean while running the Head Drum by motor.)
- Do not clean the Drum with the towel paralleling with Head tip vertically. (The Head tip is very fragile.)

C. Cleaning of the Tape Transporting section
Clean the tape Running Mechanism using the towel or the cotton swab wet with non-water added alcohol.

D. Cleaning of the operating parts.
Clean the operating parts using the towel or a cotton swab wet with non-water added alcohol.

E. Checking procedure
Do maintenance and checking according to the checking table.

2-2. CLEANING AND GREASING

A. Cleaning

a. Tape Running Mechanism (Clean it every 500 hours of actual using time.)
- Tension Pole
- S-Slant Pole
- Ace Head
- S-Guide Post
- Video Head/Drum Ass'y
- T-Guide Post
- FE-Head
- T-Slant Pole
- Capstan shaft
- S-Guide Roller
- T-Guide Roller
- Pinch Roller
- Since the above mentioned parts directly contact with tapes, they can be easily contaminated by dust or for eign matters. Also if they are contaminated by dust or foreign matters, they can affect the conditions of display directly and damage the tapes.
- Before inserting a cassette tape into the deck, make sure these parts are completely dried after cleaning with a non-water added alcohol.

b. Operating Parts (Clean it every 1,000 hours of actual using time.)
- S-Reel Table Post
- T-Reel Table Post
- Reel Gear Post
- Teeth and Surface of the Cam Gear
- Main Base Area
(S/T Slant Pole Ass'y and the moving area of Cassette Holder Ass'y)

B. Lubrication (Apply grease on parts every 2,000 hours of actual using time for lubrication.)
- S-Reel Table Post
- T-Reel Table Post
- Reel Gear Post
- Teeth and Surface of the Cam Gear
- Main Base Area
(S/T Slant Pole Ass'y and the moving area of Cassette Holder Ass'y)
- Apply grease on the above parts after cleaning with non-water added alcohol, but do not apply excessively.

2-3. MAJOR PARTS SERVICE SCHEDULE

Conduct the maintenance and the replacement of the major parts according to the below table based on the actual using time

Name	Maintenance period (Hrs)				
	1000	2000	3000	4000	5000
DRUM PRICE AS	✹	❍	✹	❍	✹
CAPSTAN MOTOR		❍		❍	
L/C BRKT TOTAL AS		❍		❍	
REEL BELT	✹	❍	✹	❍	✹
IDLER PLATE AS		✹		❍	
S/T REEL TABLE AS		✹		❍	
T-SUB BRAKE AS		❍		❍	
BAND BRAKE AS		❍		❍	
MAIN PLATE AS		❍		❍	
L-LOADING AS		❍		❍	
PINCH LEVER T/T AS		✹	❍		✹
ACE HEAD TOTAL AS			❍		
FE HEAD					❍
REEL GEAR TOTAL AS		✹	❍		✹

✹ : Check and replace parts if necessary.

❍ : Replacement

WARNING

Do cleaning lubrication from time to time even if the deck is not used.

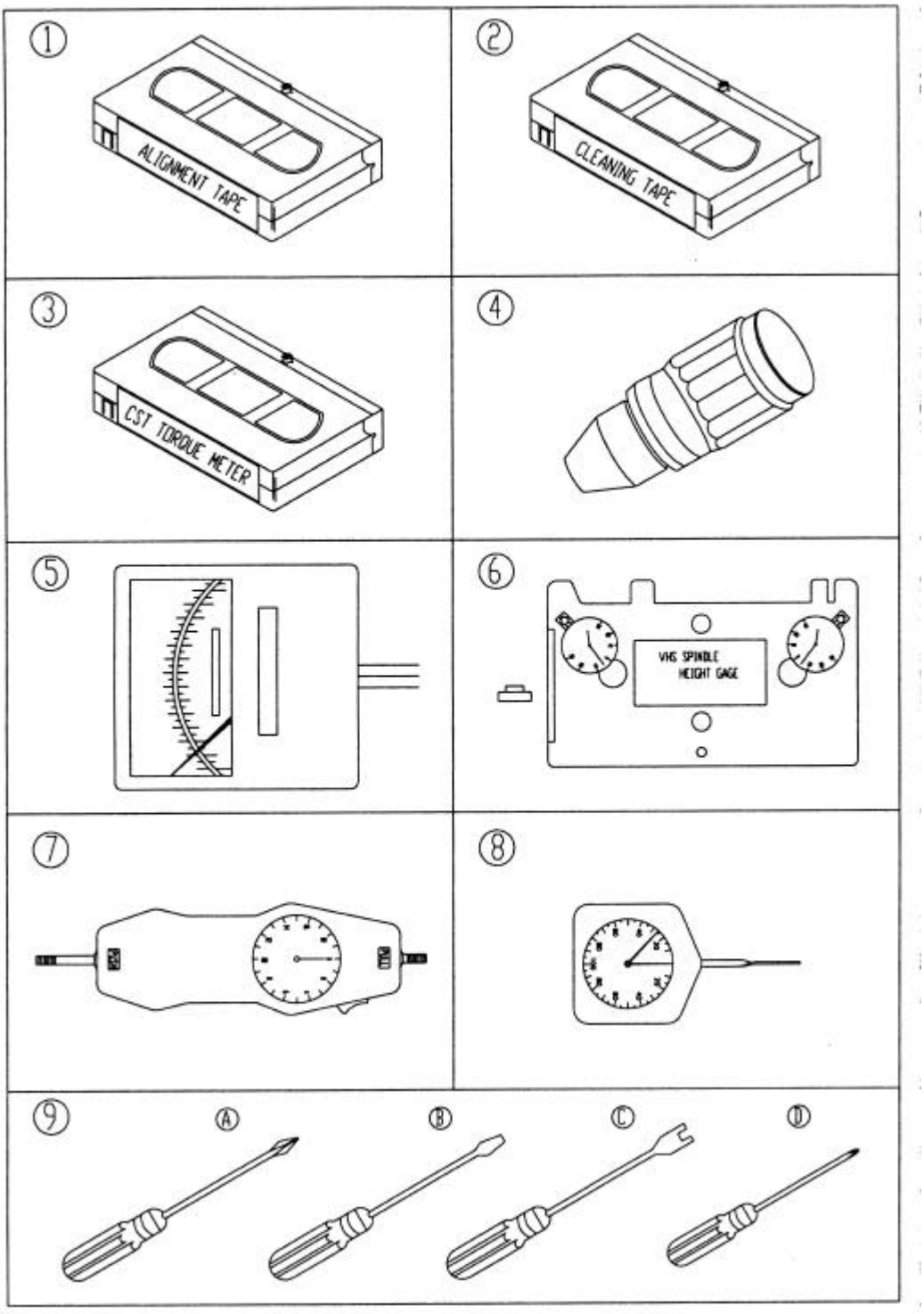
Replace all belts every 2 years. However, the condition of belts is good enough for use, you can keep using it.

3. JIGS AND TOOLS

3-1. JIG AND TOOL LIST

NO	ITEMS	MODEL	FIG. NO.	REMARKS
1	ALIGNMENT TAPE	–NTSC: SP MONOSCOPE 7KHz SP COLOR BAR 1KHz –PAL : SP MONOSCOPE 6KHz SP COLOR BAR 1KHz	①	Adjustment & Check of Odometer
2	CLEANING TAPE (DAEWOO)	DHO-602 (DAEWOO)	②	Cleaning of the Odometer
3	CST TORQUE METER	KM-300NV (K-MEDIA) KM-300RV (K-MEDIA) KM-300NFF(K-MEDIA)	③	Measurement of Reel Torque
4	DIAL TORQUE GAUGE		④	Measurement of S/T Sub Brake
5	TENTELO METER	T2-H7-UM	⑤	Measurement of Back Tension
6	PIN SPINDLE HEIGHT GAUGE	T2-V4	⑥	Measurement of the Height of Reel Table
7	PUSH-PULL GAUGE	ABOVE 2KG	⑦	MEASUREMENT OF PRESSING FORCE FOR THE PINCH ROLLER
8	TENSION GAUGE		⑧	Measurement of Idler Torgue
9	+, – DRIVER PATH DRIVER CYLINDER DRIVER		Ⓐ,Ⓑ Ⓒ Ⓓ	Disassembling & Assembling Adjustment Adjustment

3-2. SKETCH OF JIGS AND TOOLS



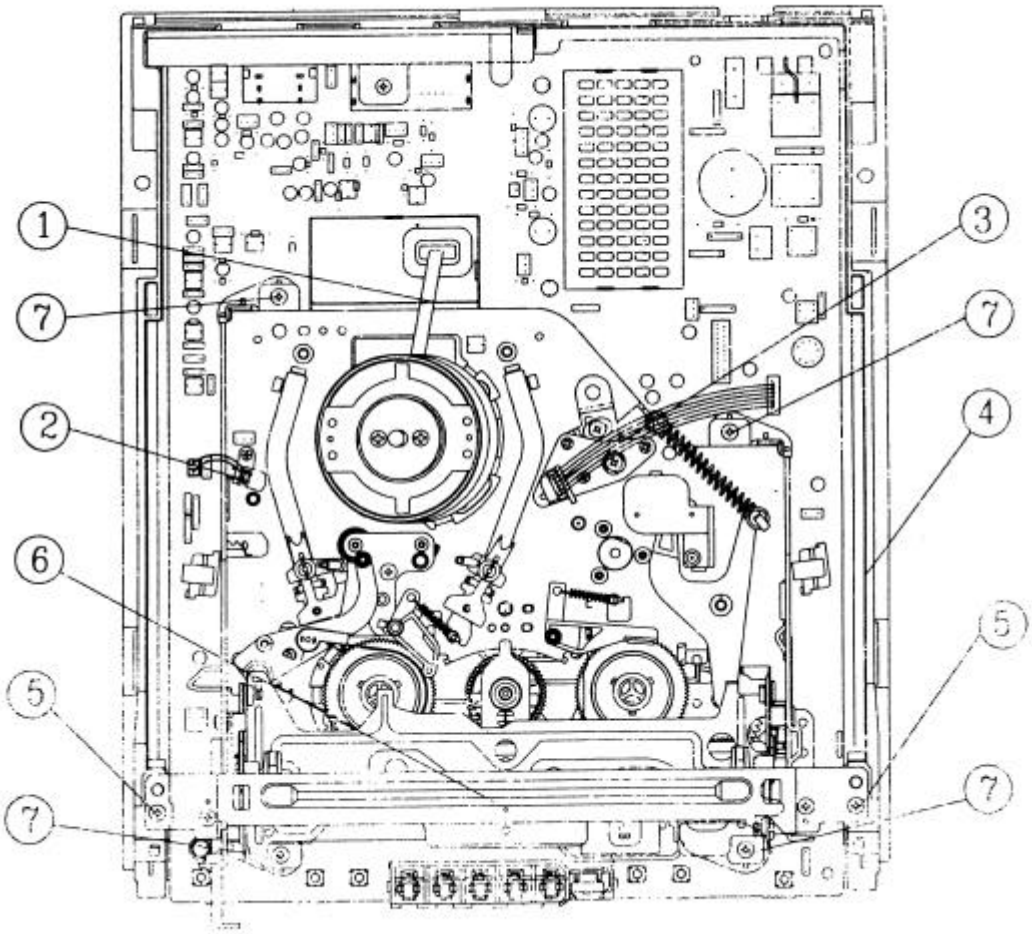
DISASSEMBLY AND REPLACEMENT

WARNING

The disassembly of the deck mechanism should be conducted at the EJECT mode and the assembling is proceeded by reversing the order.

1. DISASSEMBLY OF THE DECK TOTAL ASSEMBLY (PICTURE 3-1)

a. Disassemble the top cover and front panel.
b. Separate the Drum FPC 1 and the FE Head Connector 2 ant the A/C Head Connector 3 from the main body.
c. Unscrew 2 of the Top Plate fixing screws 5 tightened with the Main Chassis 4.
d. Unscrew 4 of the Deck Assembly 6 fixing screws & tightened with the Main Chassis 4.
e. Disassemble the Deck Ass'y 6 from the Main Chassis 4 by lifting it up but be careful not to damage any parts fixed to the main PCB Assembly.



PICTURE 3-1

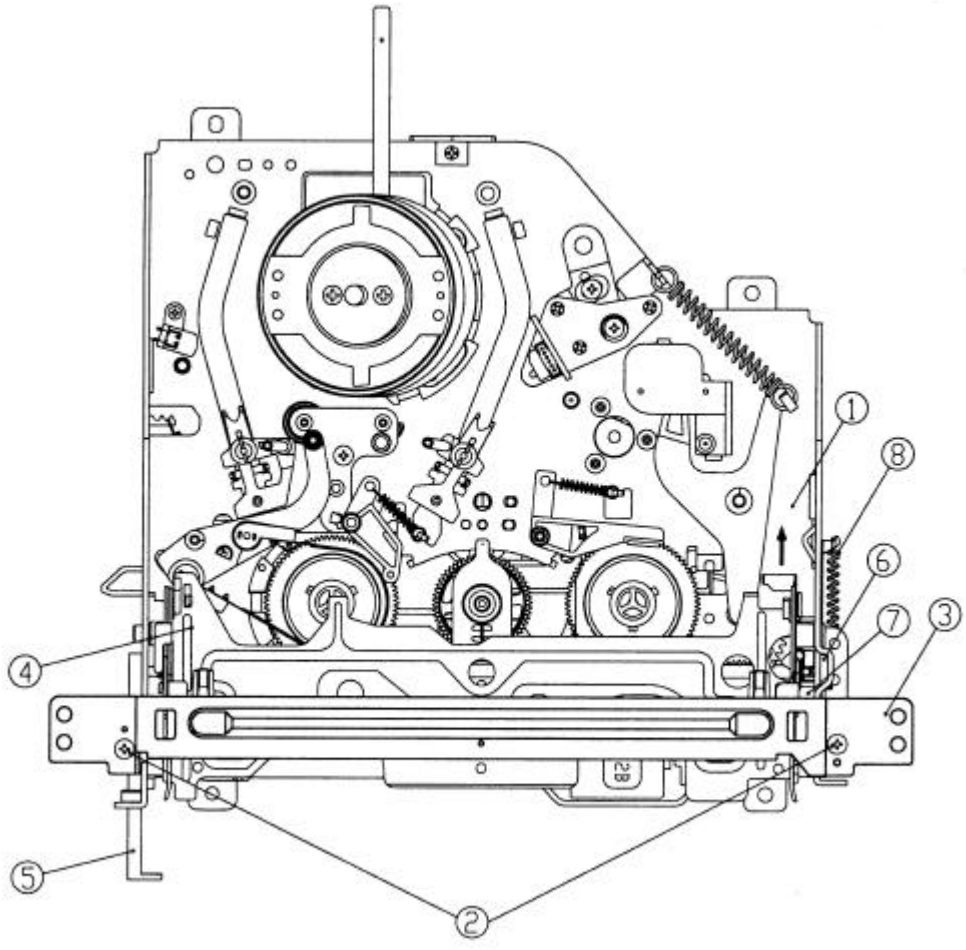
2. REPLACEMENT OF THE F/LOADING ASSEMBLY (PICTURE 3-2)

To begin with, disassemble the assembly pushing the Rack Spring 8 in the direction of an arrow.

a. Unscrew 2 of the Top Plate fixing screws 2 tightened with the Main Base Press 1 and separate the Top Plate 3 from the main body.
b. Disassemble the F/L Door Opener 5 after pushing the Cassette Holder Ass'y 4 about 20~30mm to the cassette-in direction (Arrow Direction).
c. Lift the right side of the Cassette Holder Ass'y 4 up and disassemble it after pushing it thoroughly to the cassette-out direction (Anti-Arrow Direction) but be cautious of its distortion.
d. Turn the Shaft Holder 6 90° to the clockwise direction and separate it from the Main Base Press 1.
e. Push the Loading Lever Ass'y 7 to the left, and lift the right side of it up to disassemble.
f. Replace with new parts and assemble them by the reversing procedure of the disassembly.

NOTE

In case of assembling the Loading Lever Ass'y.
After sticking perfectly the F/L Drive Rack bacward, assemble the Loading Lever Ass'y.

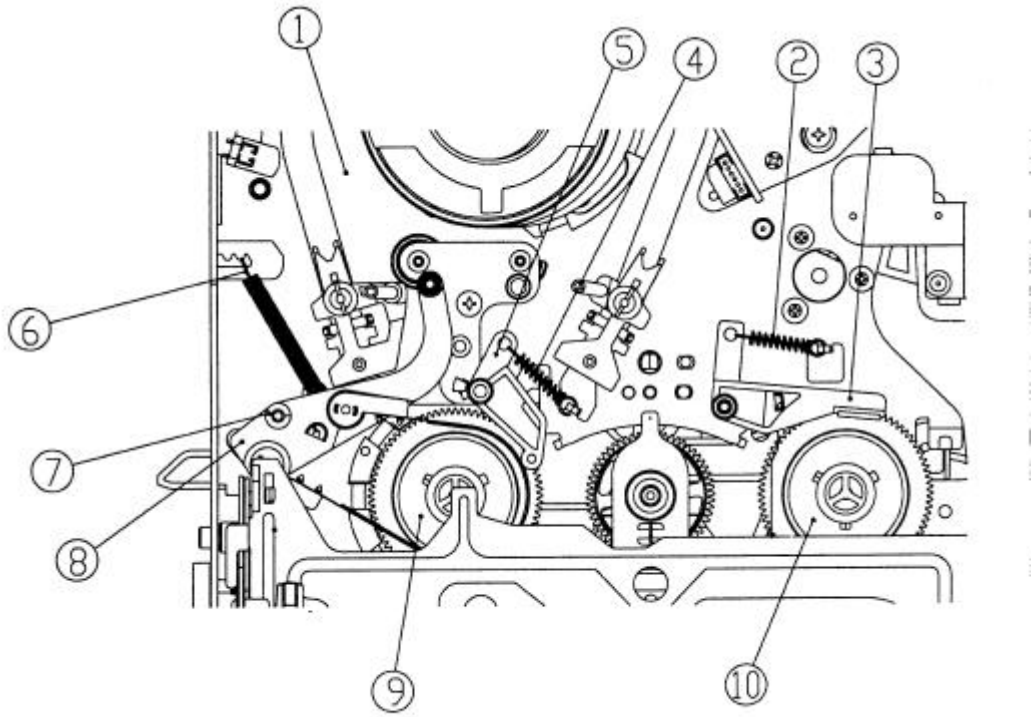


PICTURE 3-2

3. REPLACEMENT OF THE S/T-REEL TABLE ASSEMBLY

To begin with, the Front Loading ass'y should be disassembled.

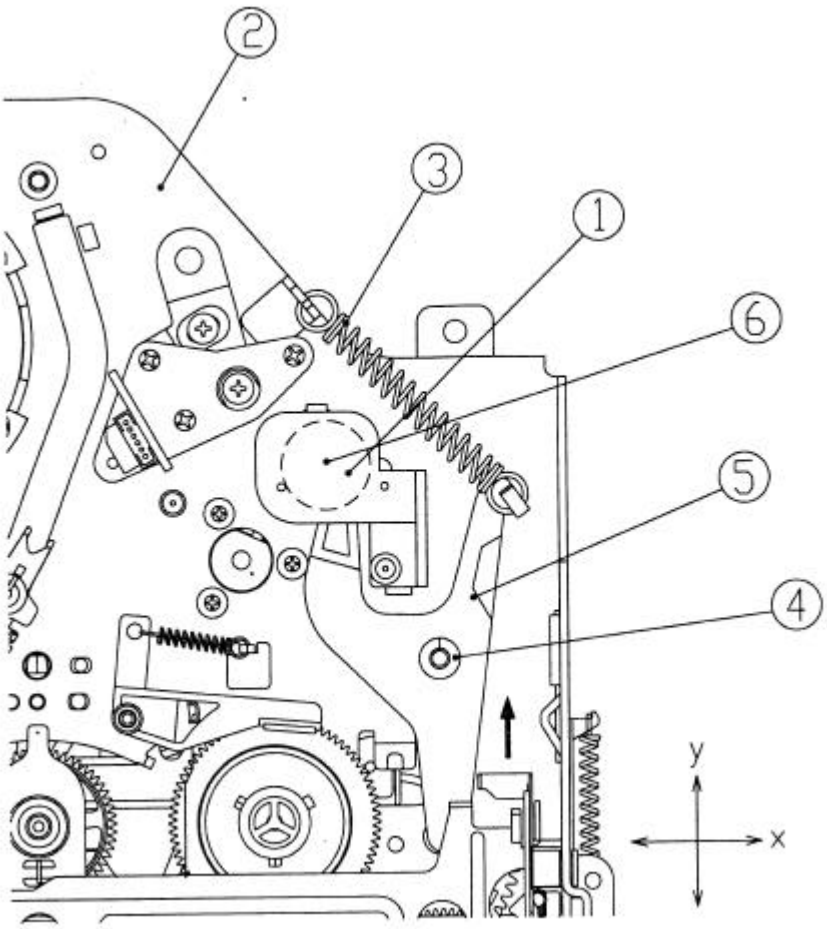
a. Release the T-Sub Brake Spring 2 connected to the Main Base Press 1 from the hook.
b. Turn the T-Sub Brake Assy 3 to the counter-clockwise direction, and lift it up for disassembly.
c. Release the S-Sub Brake Spring 4 connected to the Main Base Press 1 from the hook.
d. Turn the S-Sub Brake Assy 5 to the counter-clockwise direction, and lift it up for disassembly.
e. Release the Tension Lever Spring 6 from the Main Base press 1 to remove the Poly Washer 7 , and lift the Tension Lever Assy 8 up for disassembly.
f. Disassemble the S/T-Reel Table Assy 9 & 10 by lifting up. However be careful not to damage the teeth of gears.
g. Replace with new parts and assemble them by the reversing procedure of the disassembly.



PICTURE 3-3

4. REPLACEMENT OF THE PINCH LEVER TOTAL ASSEMBLY (PICTURE 3-4)

a. Push the hook area of the Cassette Cap Opener 1 to the Y-axle direction and lift it up to separate from the Main Base Press 2. Be cautious of breakage of Hook.
b. Disassemble the Pinch Lever Spring 3.
c. Disassemble the Pinch Lever Total Ass'y 5 next the Poly Washer 4, but be careful not to contaminate the Pinch Roller 6.
d. Replace with new parts and assemble them by the reversing procedure of the disassembly.

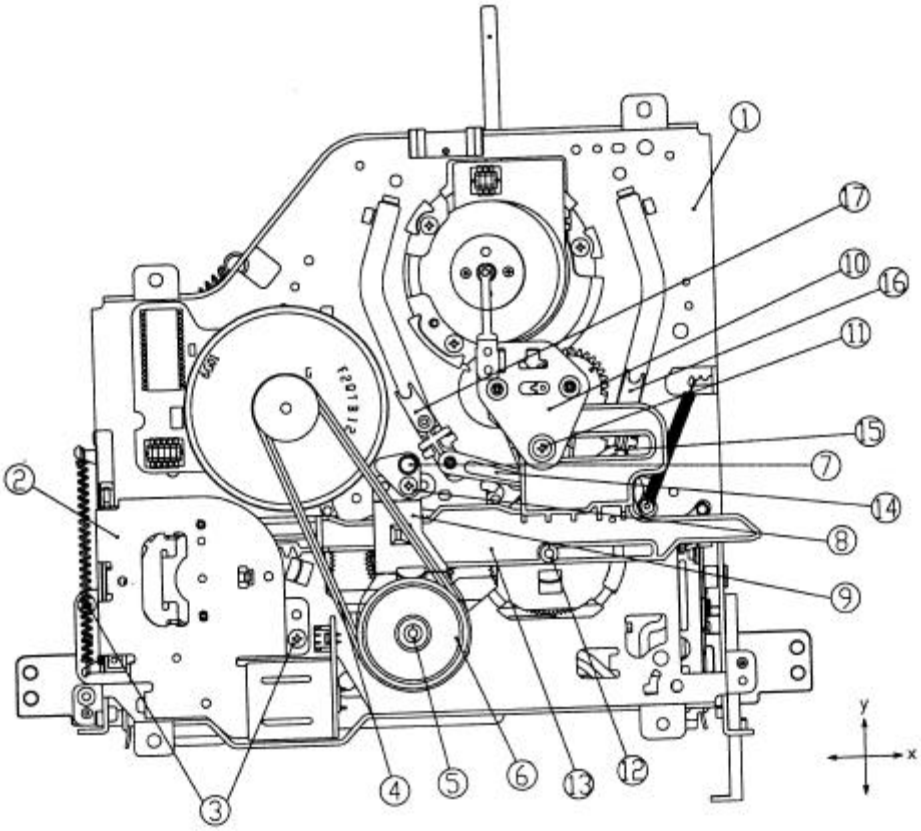


PICTURE 3-4

5. REPLACEMENT OF THE S/T SLANT POLE ASSEMBLY (PICTURE 3-5)

Disassemble the Pinch Lever Total Ass'y first before the S/T Slant Pole Ass'y.

a. Turn over the deck, and unscrew 2 of the L/C BRKT Total Ass'y 2 fixing screws 3 tightened with the Main Base Press 1. And then remove the L/C BRKT Total Ass'y 2 from the main body.
b. Disassemble the Reel Gear Total Ass'y 6 after removing the Reel Belt 4 and the Poly Washer 5.
c. Unscrew the fixing screw 8 for the LED Prism 7 tightened with the Main Base Press 1, and remove the LED Prism 7 and the Clutch Lever 9.
d. Unscrew 2 of the fixing screws 11 for the Loading Gear Bracket Ass'y 10 tightened with the Cassette Guide BRKT, and then remove the Loading Gear Bracket Ass'y 10 by pushing ti slightly to the plus Y-axle direction.
e. Remove the Poly Washer 12 and then disassemble the Main Plate 13.
f. Disassemble the R-Loading Ass'y 14 and L-Loading Ass'y 15 in sequence. And then remove the S/T Slant Pole Ass'y 16 & 17 by pushing them slightly to the minus Y-axle direction.
g. Replace with new parts and assemble them by the reversing procedure of the disassembly.



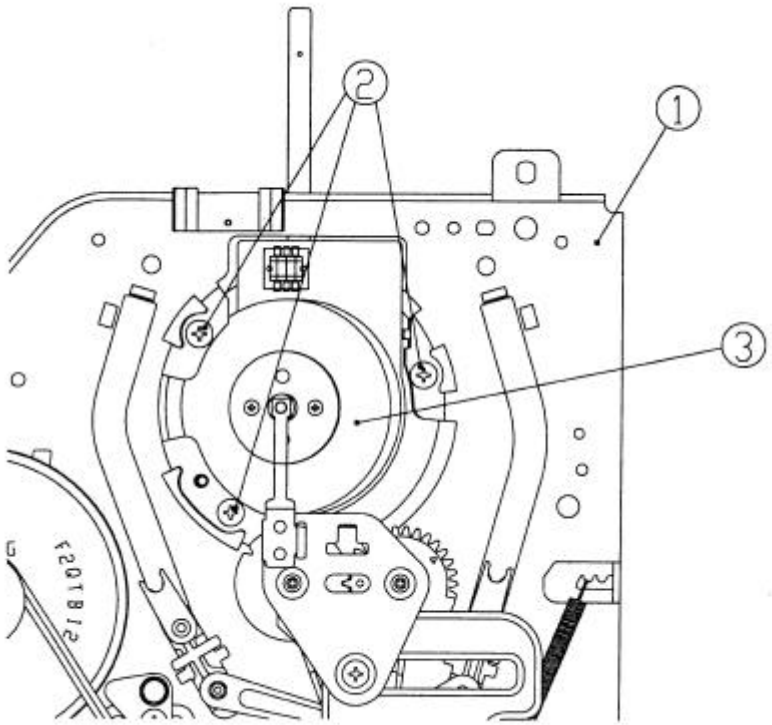
PICTURE 3-5

6. REPLACEMENT OF THE DRUM PRICE ASSEMBLY (PICTURE 3-6)

a. Turn over the Deck Assembly.
b. Unscrew 3 of the fixing screws 2 for the Drum Price Ass'y tightened with the Main Base Press 1, and disassemble the Drum Price Ass'y 3.
c. Replace the Drum as the Drum Price Ass'y package. The assembling is proceeded by the reversing order of the disassembling procedure.
d. Check the running conditions of tapes after replacement. If the adjustment of Running Mechanism is needed, adjust depending on the adjustment method of the Running Mechanism (Refer to the Chapter 5).

NOTE

- In disassembling the Drum Price Ass'y, pay attention to the distortion of the Leaf Spring Ass'y 5 within the Loading Gear Bracket Ass'y 5.
- Be careful not to damage the Head, not to contaminate the surface of the Drum, or not to scratch it when you repair or replace the Drum Price Ass'y.
- When the playback screen is abnormal, clean the Head and check the conditions of connectors. If the playback condition does not improve after these efforts, replace the Drum Price Ass'y.



PICTURE 3-6

7. REPLACEMENT OF THE CAPSTAN MOTOR (PICTURE 3-7)

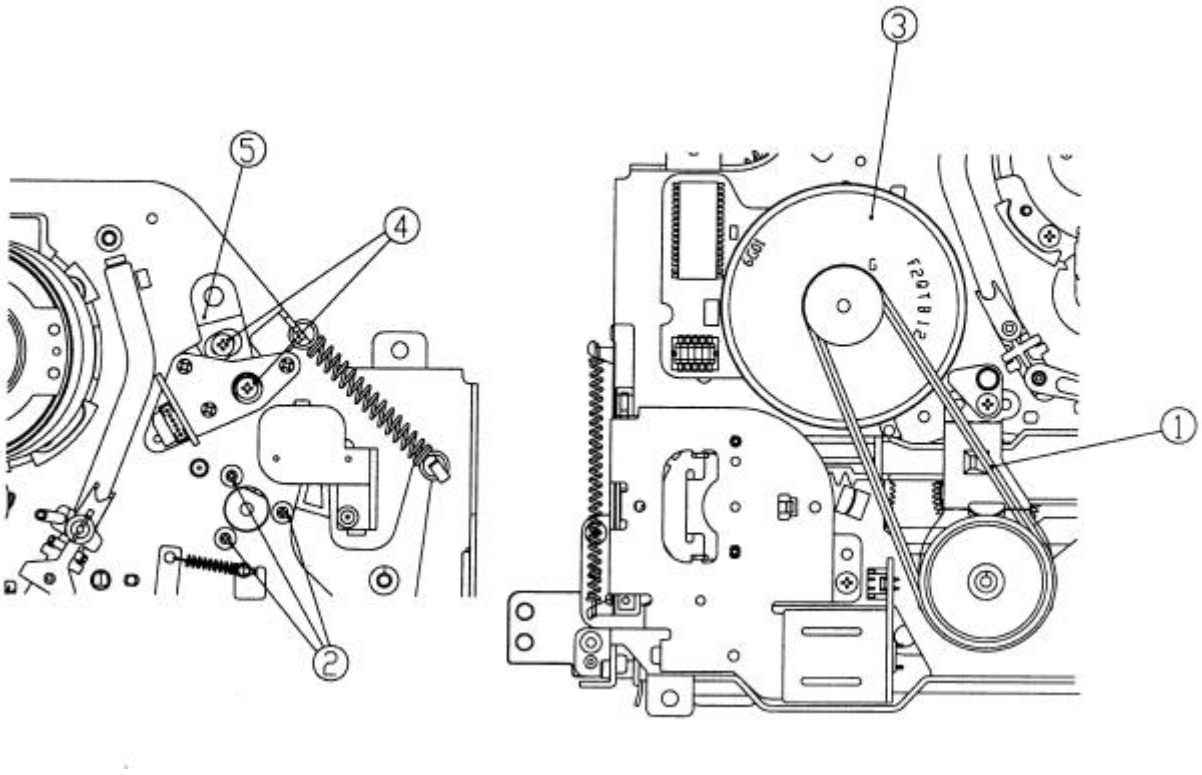
a. Turn over the Deck Ass y upside down disassemble the Reel Belt 1.
b. Turn over Deck Ass y to the upper part and unscrew 3 of the fixing screws 2 for the Capstan Motor. Disassemble the Capstan Motor 3 from the lower part of the Deck Ass y.

8. REPLACEMENT OF THE ACE HEAD TOTAL ASSEMBLY (PICTURE 3-7)

a. Unscrew 2 of the fixing screws 4 for the ACE Head Total Ass y, and disassemble the ACE Head Total Ass y 5. but be careful not to contaminate it.
b. Replace with new parts and assemble them by the reversing procedure of the disassembly.
c. Adjust the Running Mechanism depending on the adjusting method (Refer to Chapter5).

the Upper part of the Deck

the Lower part of the Deck



PICTURE 3-7

9. REPLACEMENT OF THE L/C BRACKET TOTAL ASSEMBLY (PICTURE 3-8)

Disassemble the Rack Spring & Pinch Lever Total Ass'y first before disassembling it.

a. Turn over the Deck Ass'y upside down.
b. Unscrew 2 of the fixing screws 1 for the L/C Bracket Total Ass'y and disassemble the L/C Bracket Total Ass'y 2.
c. Replace with new parts and assemble them by the reversing procedure of the disassembly.
d. Reassembling is done by checking the assembly location of L/C Bracket Total Ass'y (Refer to Pic. 4-1) pushing the Main Plate 3 completely to the right side to fix it firmly in the right position.

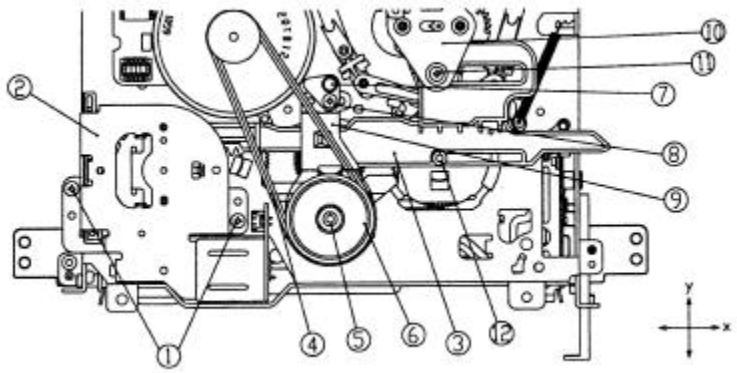
10. REPLACEMENT OF MAIN PLATE (PICTURE 3-8)

Disassemble the Rack Spring & Pinch Lever Total Ass'y first before disassembling it.

a. Disassemble the L/C Bracket Total Ass'y 2.
b. Disassemble the Reel Belt 4 before removing the Poly Washer 5.
c. Disassemble the Reel Gear Total Ass'y 6.
d. Unscrew the fixing screws 8 for the LED Prism 7 before removing the LED Prism and the Clutch Lever 9.
e. Unscrew the fixing screws 11 for the Loading Gear Bracket Ass'y 10 and push it slightly to the plus Y-axle direction for disassembly.
f. Disassemble the Main Plate 3 after removing the Poly Washer 12.
g. Replace with new parts and assemble them by the reversing procedure of the disassembly.

NOTE

- Be cautious of the distortion of the Main Plate when assembling and disassembling it.
- Be careful not to contaminate the Reel Belt with oil or grease when assembling and disassembling it.
- Push the Main Plate slightly to the minus X-axle direction to assemble Clutch Lever. And then stick the Main Plate fast to the right side.



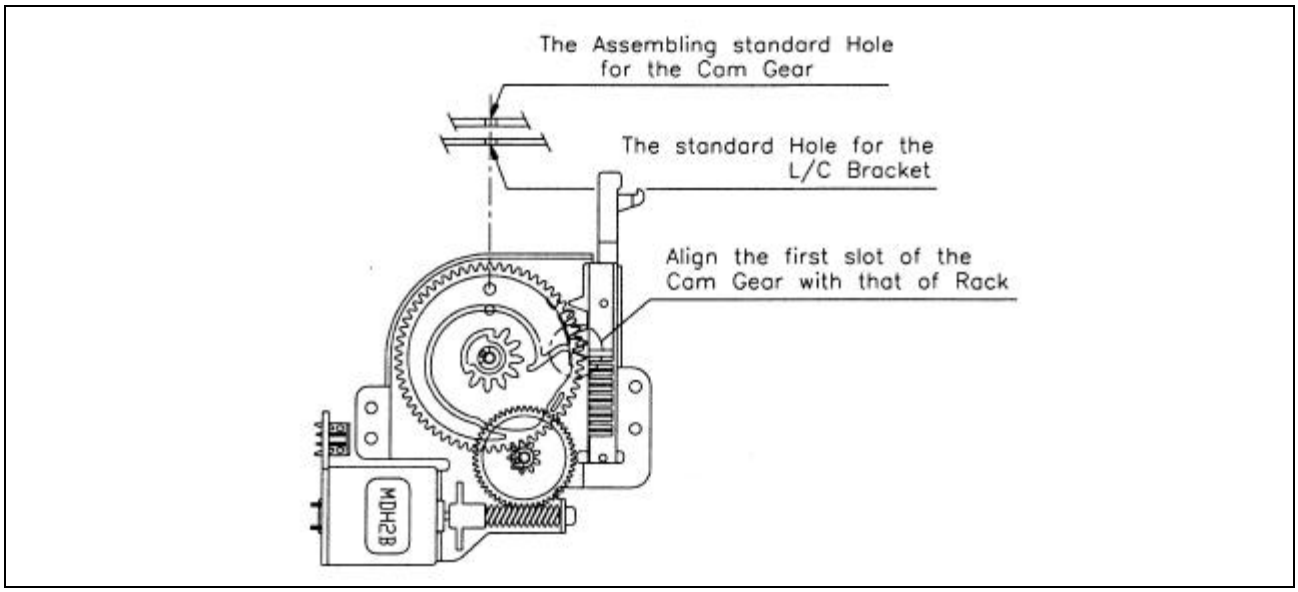
PICTURE 3-8

MECHANICAL ADJUSTMENT

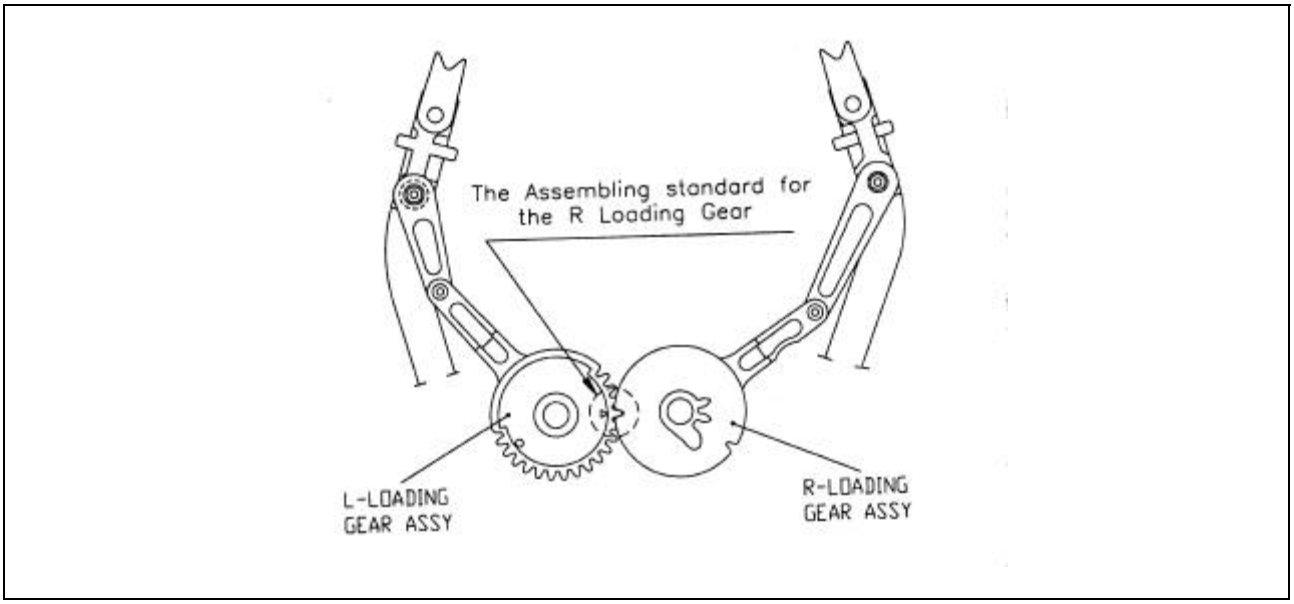
1. CHECKING OF THE LOCATION FOR EACH ASSEMBLING PART

Check the following before the disassembly, replacement and assembly of the Deck.

a. Check the assembling standard of the Deck Mechanism at the EJECT Mode.
b. Before and after assembling the L/C Bracket Total Ass'y, check the assembling location for the Cam Switch, the F/L Sub Rack and the Cam Gear.
(Refer to the Picture 4-1)
c. Check the assembling location of the R Loading Ass'y and L Loading Ass'y to assemble Loading Gear Bracket Ass'y. (Refer to the Picture 4-2)


The Assembling standard Hole for the Cam Gear
The standard Hole for the L/C Bracket
Align the first slot of the Cam Gear with that of Rack
MDH2B

PICTURE 4-1 The assembling standard for the L/C Bracket Total Ass'y



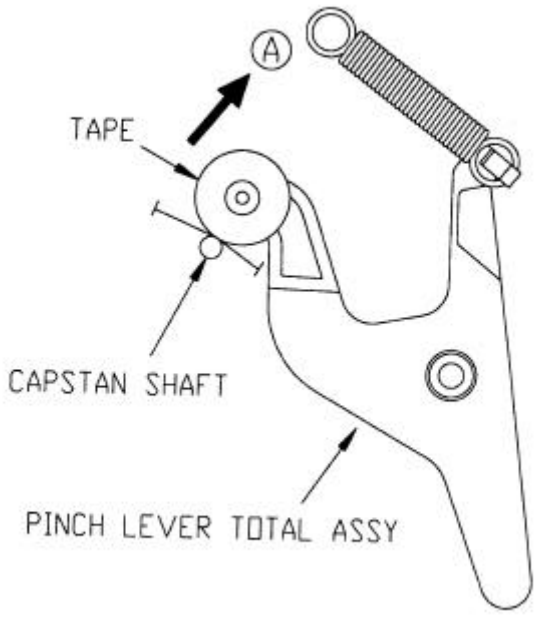
PICTURE 4-2 The assembling standard for the R and Loading Ass'y

2. MODE SETTING METHOD

a. Turn the power switch on while the F/Loading Ass'y is assembled.
b. When you turn the Worm Gear 2 or 3 times by manual, it starts loading and moves to the PLAY/STOP BY Mode.
c. Push any button of the mode you want to set.
d. Unplug when the mode you selected is on.
e. F/Loading Ass'y should be disassembled and assembled at the EJECT mode.

3. MEASUREMENT OF THE PRESSURE OF THE PINCH ROLLER

a. Gently insert a cassette tape into the deck for Loading and push the PLAY button to run the tape.
b. Connect a Push and Pull Gauge to the lower part of the Pinch Lever Total Ass'y and pull it slowly to the A direction. (Refer to Picture 4-3)
c. Check the value of the gauge when the tape stops. (Specification: 1.2 ± 0.2kg)



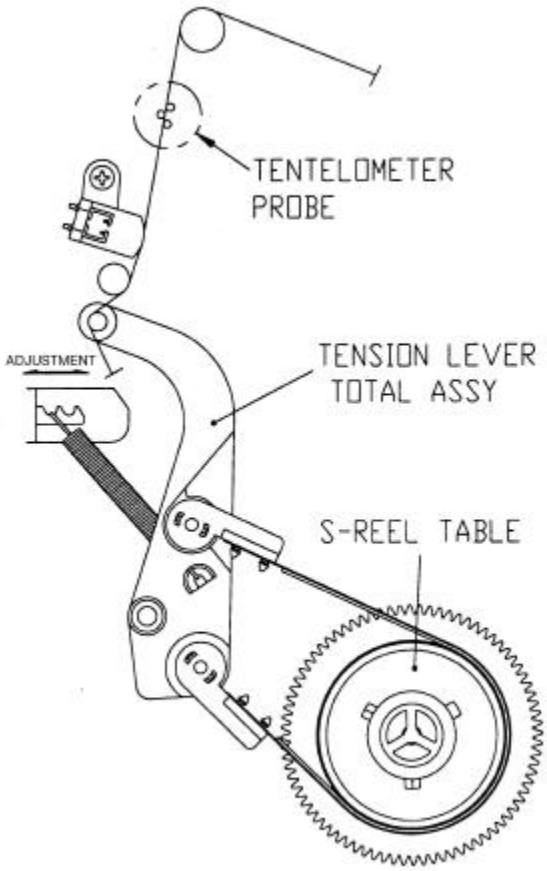
PICTURE 4-3 The measurement of the pressure of Pinch Roller

4. MEASUREMENT AND ADJUSTMENT OF THE BACK TENSION

a. Insert a T-120 cassette tape that winds tape equally on the supply side and T/Up side.
   And push the PLAY button and wait until the operation becomes stable. (About 10 to 20 seconds)
b. Set the Tentelometer as shown in the picture 4-4, and measure the value of tension.
   (Specification: 2-~28g)
c. When the value is out of the specification, move the spring hook as shown in the picture 4-4 to adjust the value of tension.

NOTE

- Make sure that the probe of Tentelometer is adequately attached to the tape.
- The Tentelometer is so sensitive that it is recommended to measure about 3 times.



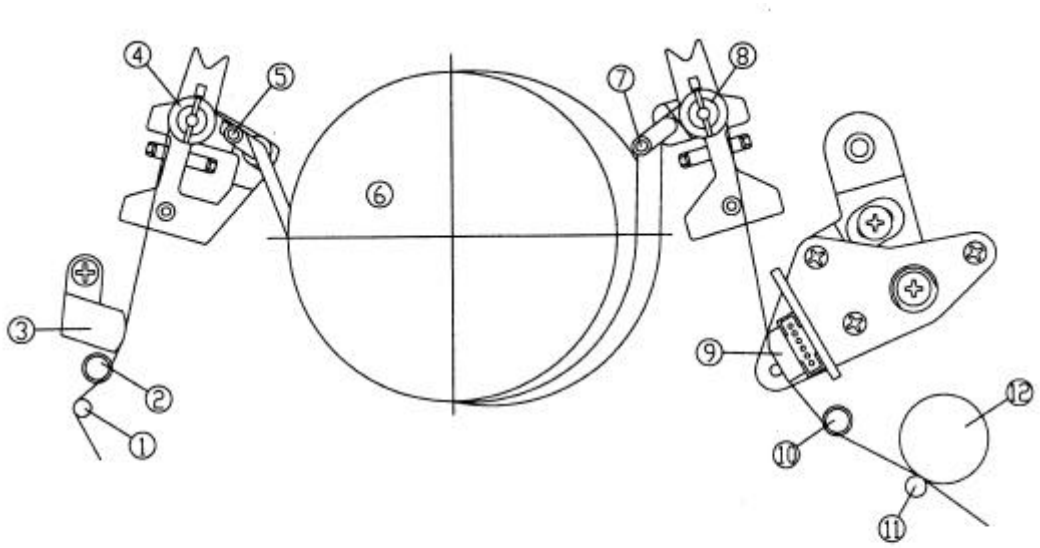
PICTURE 4-4 Measurement and Adjustment of the Back Tension

ADJUSTMENT OF TAPE TRANSPORTING SYSTEM

Since the Tape Transporting System is usually set at the factory before the shipment, it is not necessary to djust or check always. However you should check and adjust the Tape Transporting System in these following cases.

- There is some noise on the screen during the playback.
- The tape has been damaged.
- The components of the Tape Transporting System have been replaced.

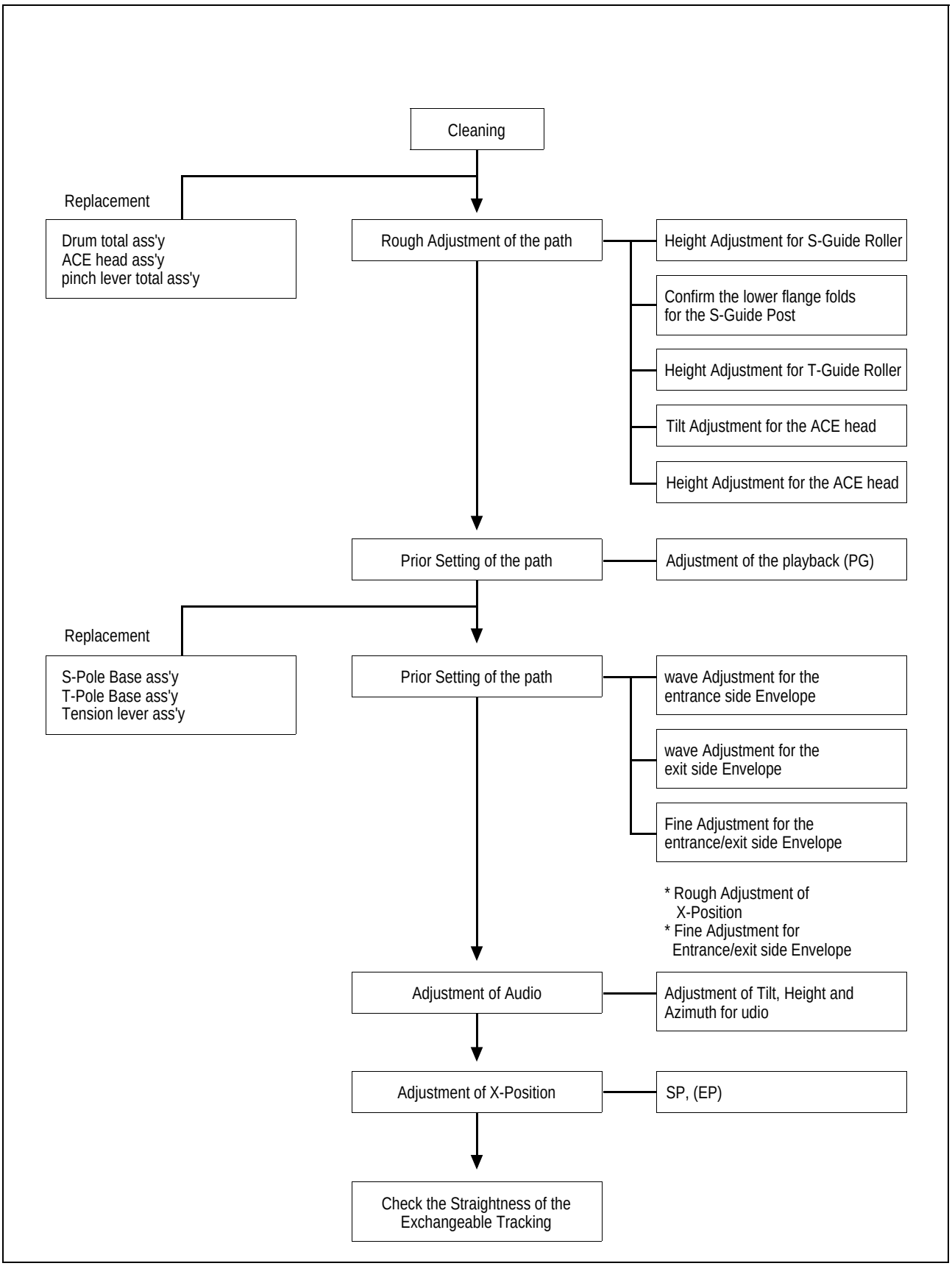
1. A SKETCH OF THE TAPE TRANSPORTING SYSTEM



1	SLANT POLE	5	SLANT POLE	9	ACE HEAD
2	TAPE GUIDE POST	6	DRUM	10	TAPE GUIDE POST
3	FE HEAD	7	SLANT POLE	11	CAPSTAN SHAFT
4	GUIDE ROLLER	8	GUIDE ROLLER	12	PINCH ROLLER

PICTURE 5-1

2. ADJUSTMENT FLOW FOR THE TAPE TRANSPORTING SYSTEM


Cleaning
Replacement
Drum total ass'y
ACE head ass'y
pinch lever total ass'y
Rough Adjustment of the path
Height Adjustment for S-Guide Roller
Confirm the lower flange folds for the S-Guide Post
Height Adjustment for T-Guide Roller
Tilt Adjustment for the ACE head
Height Adjustment for the ACE head
Prior Setting of the path
Adjustment of the playback (PG)
Replacement
S-Pole Base ass'y
T-Pole Base ass'y
Tension lever ass'y
Prior Setting of the path
wave Adjustment for the entrance side Envelope
wave Adjustment for the exit side Envelope
Fine Adjustment for the entrance/exit side Envelope
* Rough Adjustment of X-Position
* Fine Adjustment for Entrance/exit side Envelope
Adjustment of Audio
Adjustment of Tilt, Height and Azimuth for udio
Adjustment of X-Position
SP, (EP)
Check the Straightness of the Exchangeable Tracking

3. THE ADJUSTING PROCEDURE

3-1. ROUGH ADJUSTMENT OF THE PATH

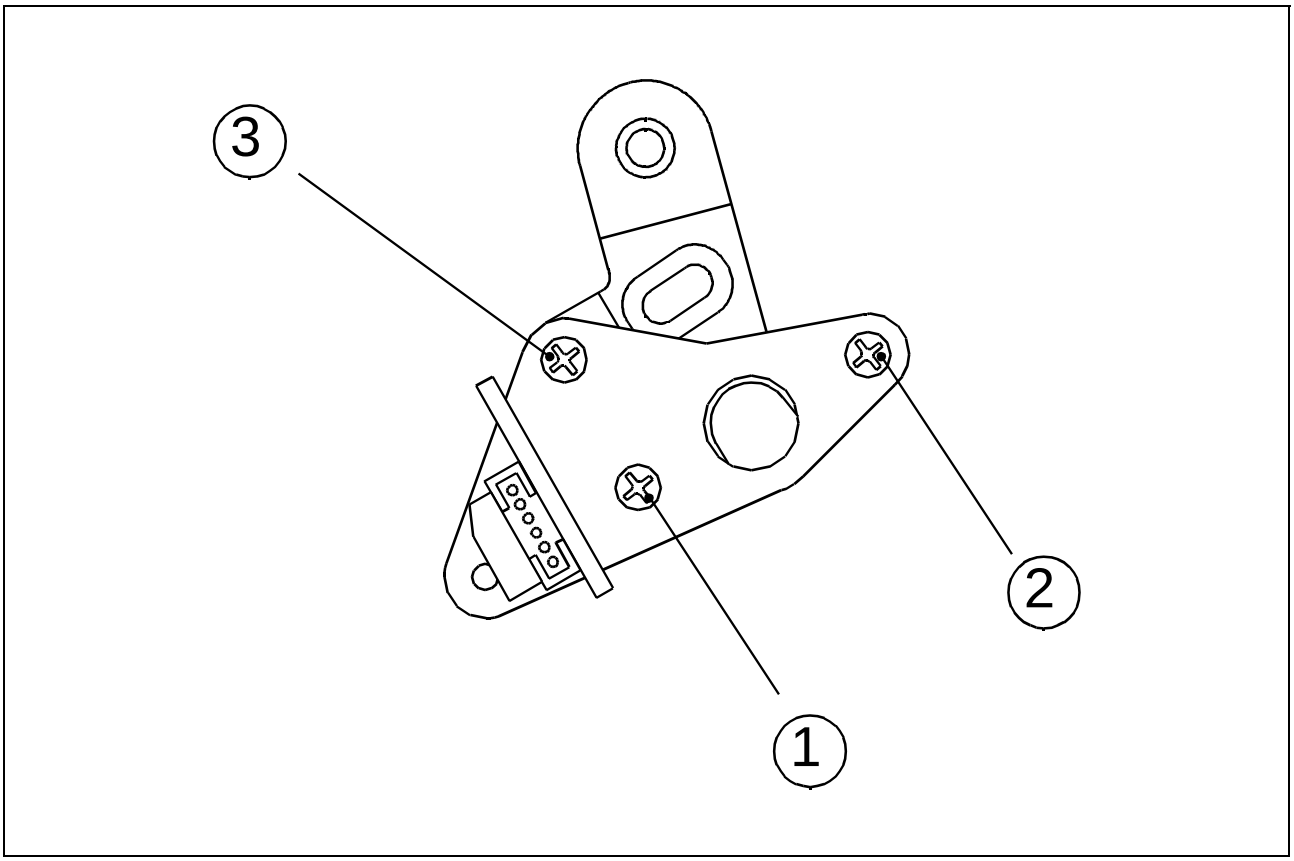
Insert E-160 cassette tape into the Deck and push the PLAY button.

1-1) Height Adjustment for the S/T-Guide Roller

a. Make sure if the tape is folded or cracked between the tape and the upper Flange of S/T-Guide Roller and the entrance/exit side Lead Line of Drum while the tape is running.

b. If there is any crack or fold on the tape, adjust for smooth run of the tape by rotating the S/T-Guide Roller.

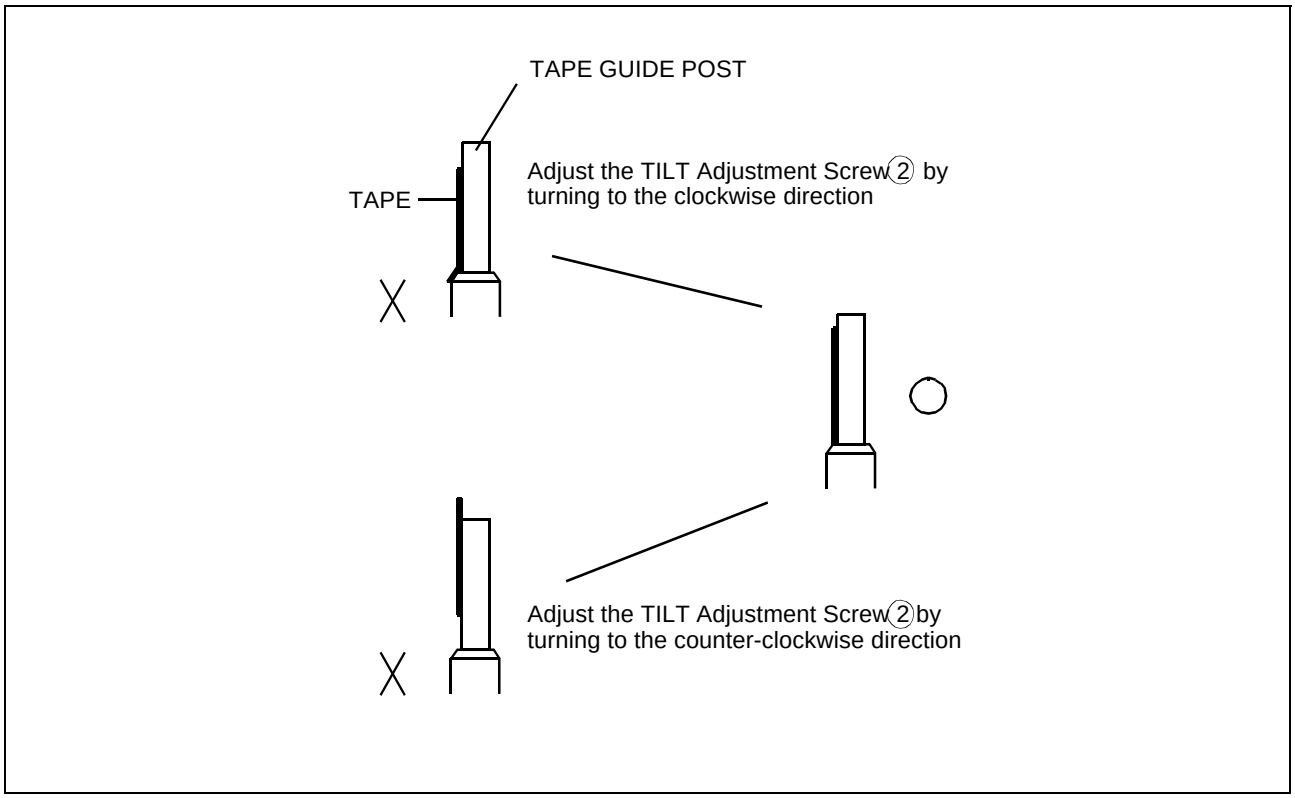
1-2) Tilt Adjustment of the Ace Head



PICTURE 5-2

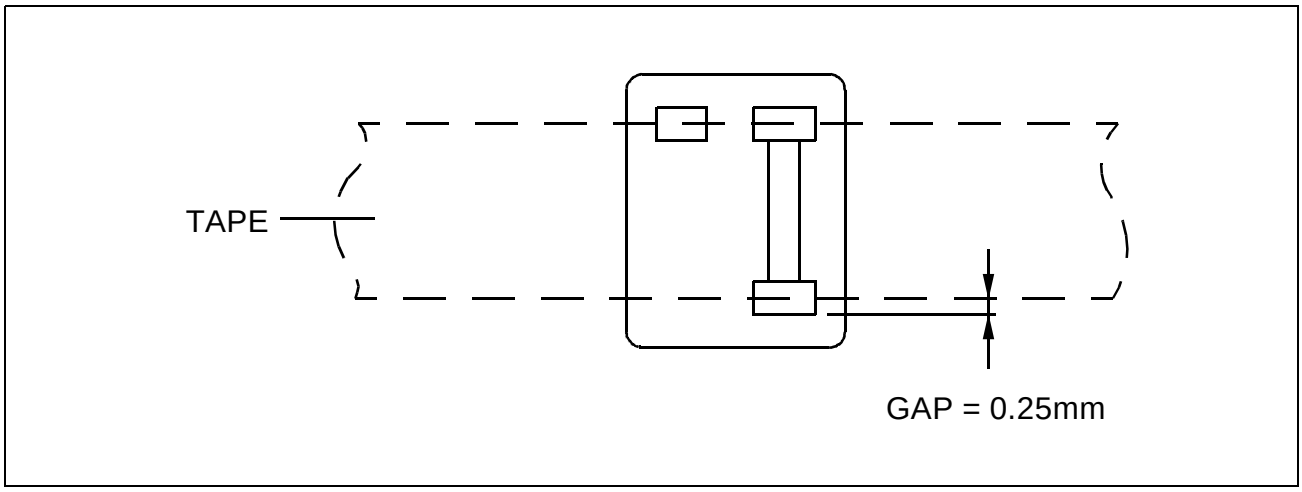
a. Check the running condition of the tape at the Lower Flange of the Tape Guide Post (T-Side).

b. If the running condition of tape is abnormal, adjust by the Tilt adjusting Screw (2 of Picture 5-2) as shown in the picture 5-2 for a smooth run of tape.


TAPE GUIDE POST
TAPE
Adjust the TILT Adjustment Screw ② by turning to the clockwise direction
Adjust the TILT Adjustment Screw ② by turning to the counter-clockwise direction

PICTURE 5-3

1-3) Height Adjustment for the Ace Head

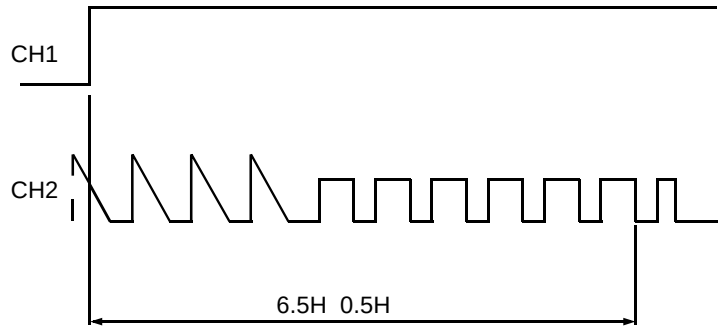


PICTURE 5-4

a. Check if the gap between the lower part of tape and the lower part of CLT Head is 0.25mm.
b. If the gap is more than 0.25mm, turn the screw to the counter-clockwise direction as 1→2→3 step.
c. If the gap is less than 0.25mm, turn the screw to the clockwise direction as 1→2→3 step.

3-2. PRIOR ADJUSTMENT OF THE PATH (ADJUSTMENT OF PG)

a. Connect the Channel 1(CH1) of the Oscilloscope to TP01-3(Head Switching Pulse) and CH2 to the VIDEO OUT. And align the Tracking VR on the center.
b. Playback the Stairstep Signal Tape (DN 2).
c. Turn the PG Volume and adjust the gap between the Switching signal and the V-Sync signal to be 6.5H ± 0.5H.



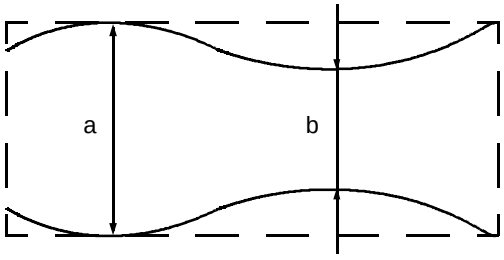
PICTURE 5-5

3-3. ADJUSTMENT OF STRAIGHTNESS

Connect the Channel 1(CH1) of the Oscilloscope to the TP01-2(CTL Pulse) and CH2 to the TP01-4 (Envelope Wav and EXT.Trigger to the TP01-3 (Switching Pulse).
And then, playback the test tape of the SP Mode.

3-1) Height Adjustment for the Ace Head
a. adjust the Tracking VR to maximize the FM signal of the test tape.
b. Make the entrance and exit side Envelope Wave same as the Picture 5-6 by adjusting the S/T-Guide Roller (4 and 8 of Picture 5-1).

a : Envelope Maximum Output
b : Envelope Minimum Output



$b/a \geq 0.75$

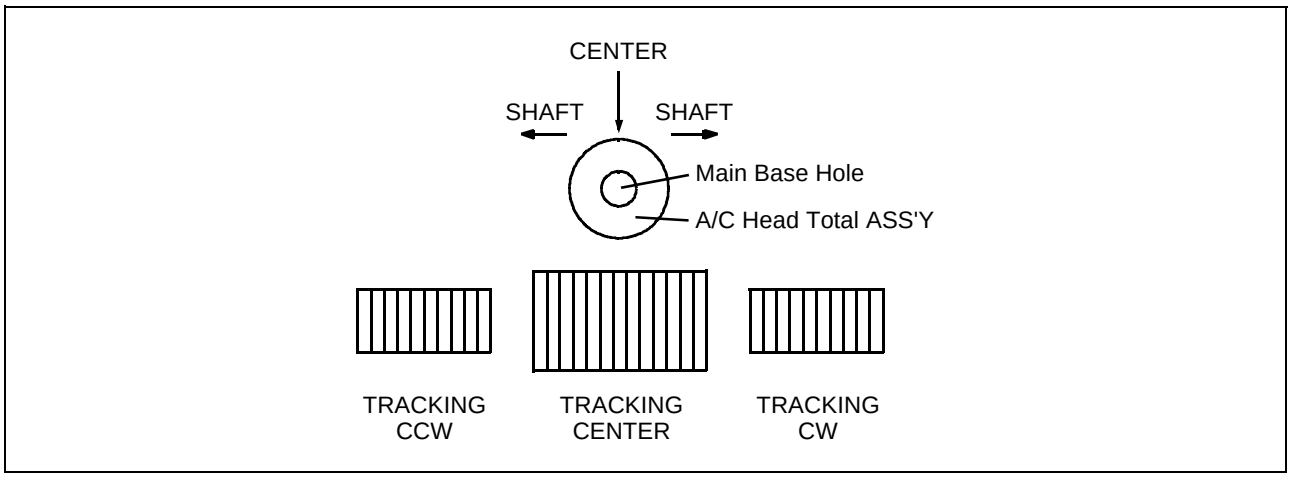
PICTURE 5-6

3-2) Rough Adjustment of the X-Position

a. Turn the Tracking VR to align it on the center.

b. Loosen the A/C Head Screws ($ & %) of Picture 5-2 by turning about 90°~120°.

c. Maximize the Envelope Wave of the Oscilloscope by turning the A/C Head Total Ass'y with a (+) driver as shown in the picture 5-7.



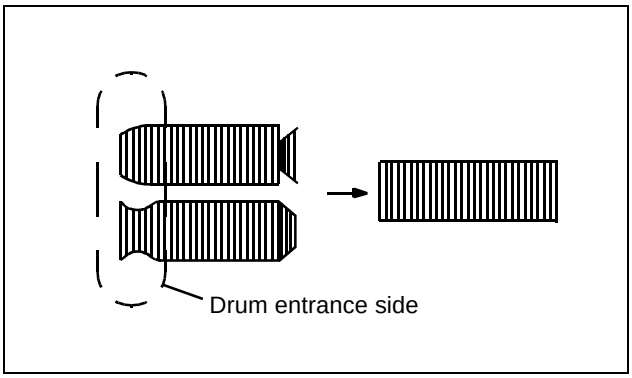
PICTURE 5-7

3-3) Fine Adjustment of Entrance/Exit side

a. Check if the Envelope Wave of the Oscilloscope changes constantly while turning the Tracking VR to the CW/ CCW direction.

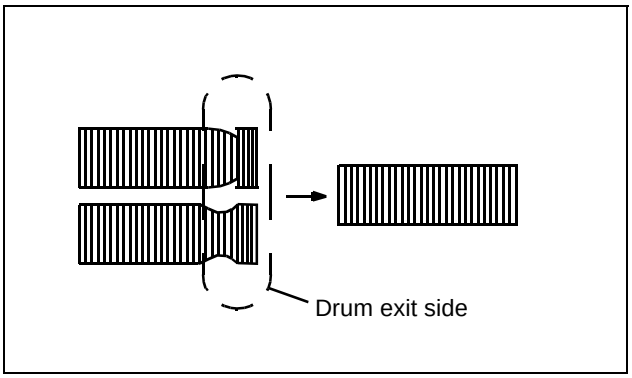
b. If the Envelop Wave of the Oscilloscope at the entrance or/and the exit side changes unsteadily as shown in the picture 5-8 and 5-9, adjust repeatedly the S/T-Guide Roller where the wave is not flat.

Drum entrance side

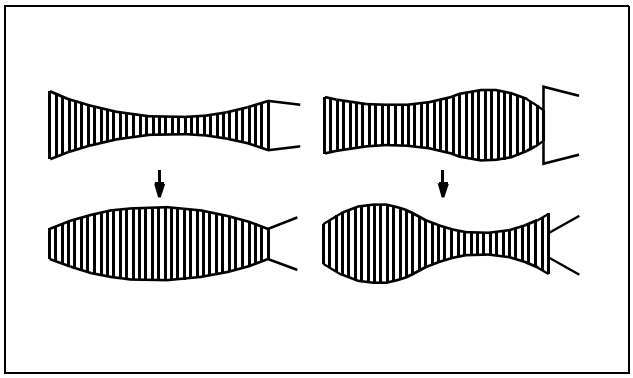


PICTURE 5-8

Drum exit side



PICTURE 5-9



PICTURE 5-10

3-4. ADJUSTMENT OF THE AUDIO

Before adjusting the Audio, play the tape and check if there is any fold on the tape at the lower part of the Tape Guide Post (T-side).

4-1) Tilt and Height Adjustment of the Audio

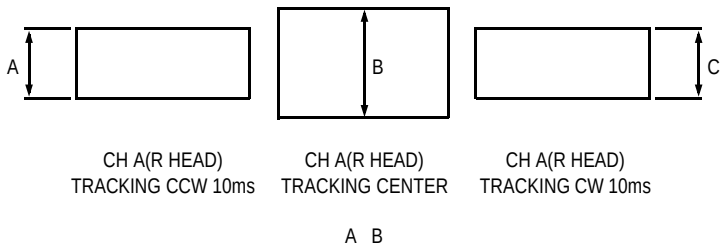
a. Connect the AUDIO OUTPUT to an Audio Level Meter.
b. Playback the DP-1/DN-1(Color Bar) and check the output of the AUDIO.
   (Specification: Minimum, Output -4.5~-8.5dBm)
c. If the 1MHz output is below the gauge value, adjust the Tilt and the Height of the Ace Head again according to the same method as 1-2) and 1-3).

4-2) Adjustment of the Audio Azimuth

a. Play the DP-2/DN-2 tape(Stairstep: 6kHz) while connecting the AUDIO OUTPUT to an Audio Level Meter.
b. Adjust to maximize the output of the Audio by turning the A/C Head Screw (2 of Picture 5-2)
   * Specifications
   - Minimum Output: -8.5 ~ -12.5dBm
   - The output difference between 1MHz and 6MHz: +2~4dBm
   - The Level variation of 6MHz Audio: within 1dBm
c. Check if there is any severe fluctuation or top-down vibration of the tape between the T-Guide Roller and the A/C Head while playing the tape after adjustment.
   If there is any problem, readjust the Audio.
d. Check the condition of the Envelope Wave after adjusting. If there is any problem, conducts the fine readjustment of the entrance and exit side according to the same procedure as 3-3).

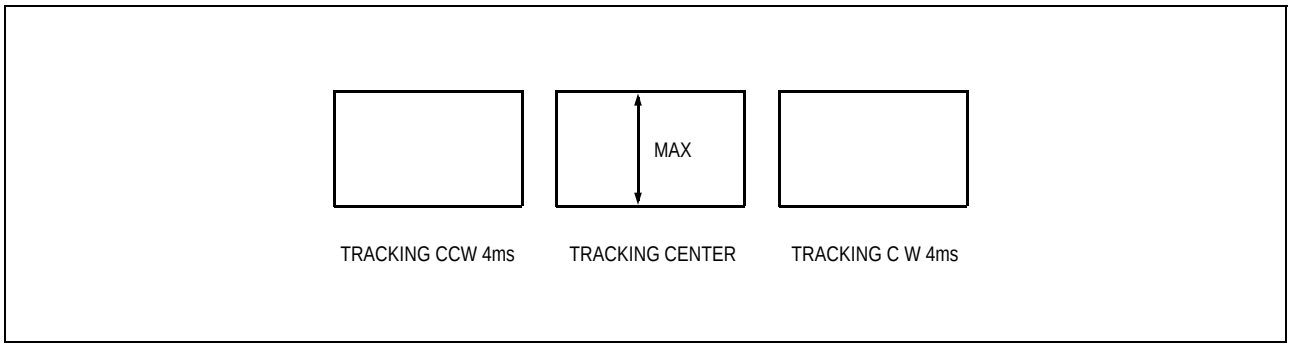
3-5. ADJUSTMENT OF THE X-POSITION

a. Connect the Channel 1(CH1) of the Oscilloscope to the TP01-2 (CTL Pulse), and CH2 to the TP01-4(Envelope), and EXT. Trigger to the TP01-3(Switching Pulse).
b. Playback the test tape of the SP Mode after aligning the Tracking VR on the center.
c. Turn and adjust the A/C Head Total Ass'y with a (+) driver (refer to the picture 5-7) to make the Envelope Wave same as the picture 5-12 while turning the Tracking VR to the CW/CCW direction.



PICTURE 5-11

d. Playback the test tape DN-2E(EP Mode)/DP-2 to check if the its directional feature is same as the picture 5-13. (There should be no major change of wave or screen noise from the CCW 4ms to the CW 6ms range of the Tracking Volume.)



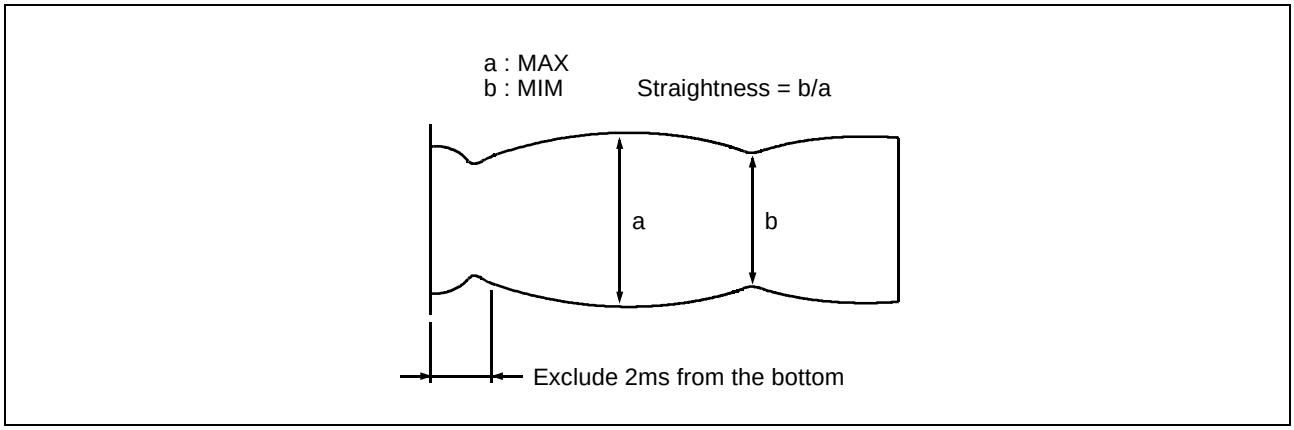
PICTURE 5-12

e. If the above said directional feature is not found, readjust from step "B".

f. Check if the output of DP-2/DN-2 6kHz is maximum after adjusting the X-Position.

g. If every step is acceptable, apply the lock paint to the A/C Head Screw 1, 2 and 3.

3-6. CHECKING OF THE STRAIGHTNESS OF THE EXCHANGEABLE TRACKING



MODE	TAPE SPEED	CHECKING POINT	THE AMOUNT THE TRACKING VR MOVED			
			CCW 6ms	CCW 4ms	CENTER	CCW 6ms
SP	DP-2 (DN-2)	STRAIGHTNESS	4:3		4:3.5	4:3
		NOISE	NONE		NONE	NONE
EP	DP-2E	STRAIGHTNESS		4:3	4:3.5	4:3
		NOISE		NONE	NONE	NONE

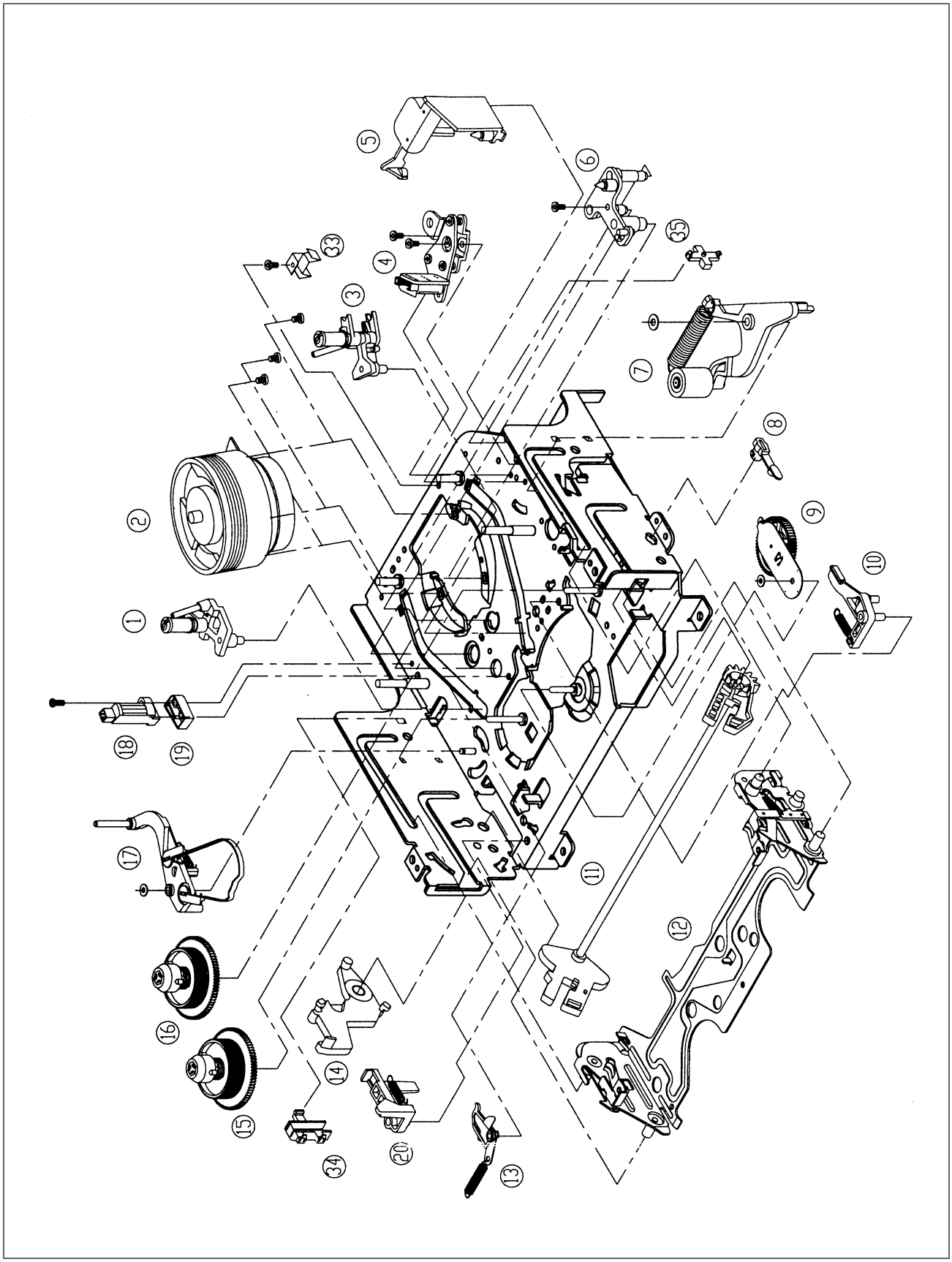
PICTURE 5-13

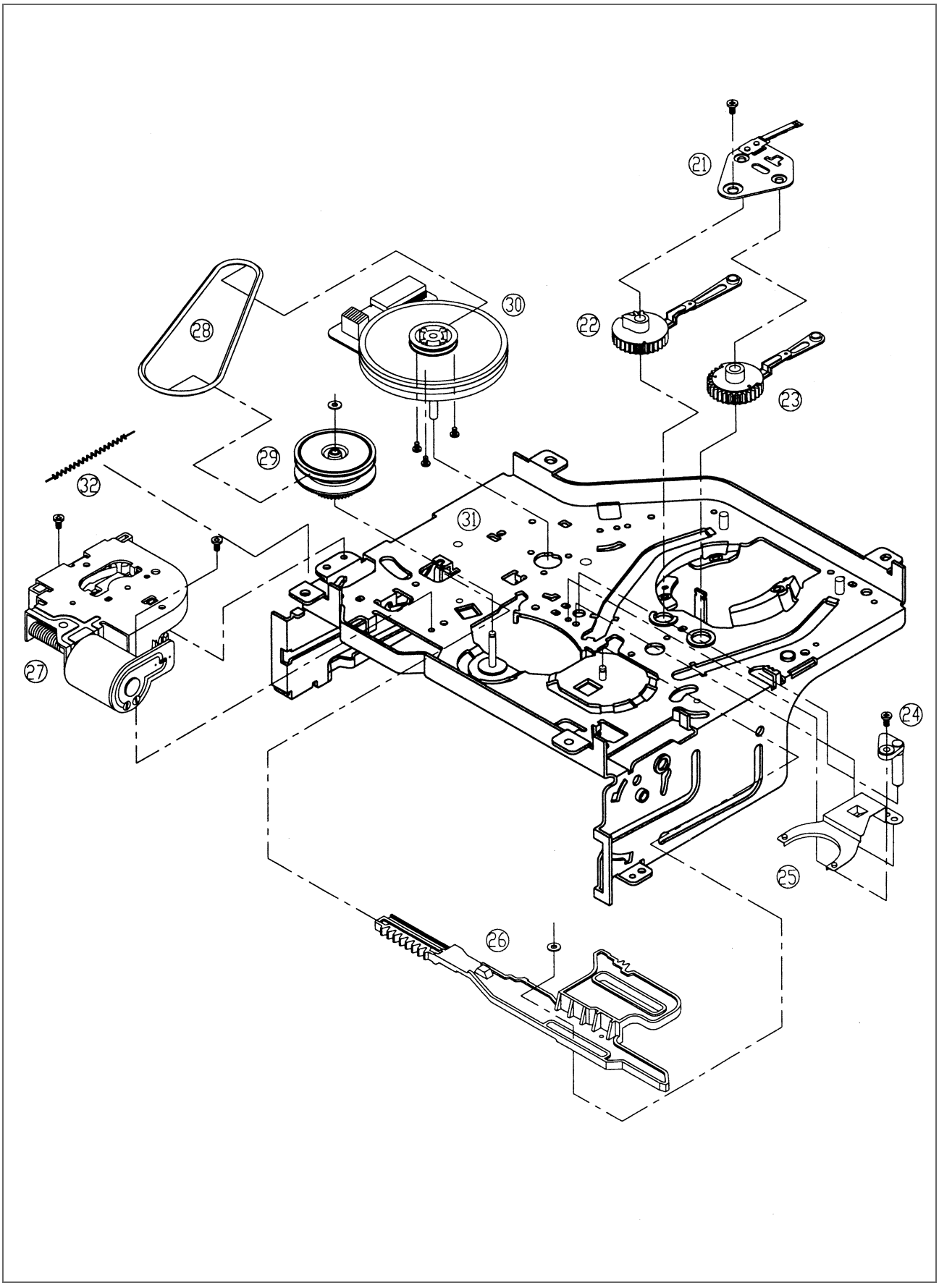
3-7. FINAL INSPECTION

Make sure no tape wrinkle is caused at each Guide Roller and Post.

EXPLODED VIEW OF DECK AREA AND PARTS LIST

1. EXPLODING VIEW OF THE DECK




21
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2. PARTS LIST OF DECK

NO	STOCK NO	PART NAME	Q'TY	REMARK
1	97SA255600	S-SLANT POLE AS	1	
2	97SA254830	DRUM PRICE AS	1	NTSC VCP
2-1	97SA254630	DRUM PRICE AS	1	NTSC VCP
2-2	97PA265131	DRUM PRICE AS	1	NTSC 2•HD Hi-Fi VCP
3	97SA255700	T-SLANT POLE AS	1	PAL VCR
4	97SA257500	A/C HEAD TOTAL AS	1	NTSC VCP
4-1	97SA260200	A/C HEAD TOTAL AS	1	PAL VCR
5	97S1800500	CST CAP OPENER	1	
6	97S2401000	CST GUIDE BRKT	1	
7	97SA256600	PINCH LEVER T/T AS	1	
8	97S2301900	SHAFT HOLDER	1	
9	97SA256900	IDLER PLATE AS	1	
10	97SA257200	T-SUB BRAKE AS	1	
11	97SA257300	LOADING LEVER AS	1	
12	97SA257400	CST HOLDER AS	1	
13	97SA257100	S-SUB BRAKE AS	1	
14	97S1800600	F/L DOOR OPENER	1	
15	97SA256700	S-REEL TABLE AS	1	
16	97SA256800	T-REEL TABLE AS	1	
17	97SA257000	TENSION LEVER T/T AS	1	
18	97S8009500	FF HEAD	1	RECORD MODEL
19	97S2301800	FF HEAD HOLDER	1	RECORD MODEL
20	97SA313300	REC S/W LEVER AS	1	RECORD MODEL
21	97SA256100	LOAD GEAR BRKT AS	1	
22	97SA255800	L-LOADING AS	1	
23	97SA255900	R-LOADING AS	1	
24	97S2610800	LED PRISM LINK	1	
25	97S2606900	CLUTCH LEVER	1	
26	97SA260100	MAIN PLATE AS	1	
27	97SA256200	L/C BRKT T/T AS	1	
28	97S5500500	REEL BELT	1	
29	97SA256400	REEL GEAR T/T AS	1	
30	97S8101000	CAPSTAN MOTOR	1	
31	97SA255500	MAIN BASE AS	1	
32	97S3009500	RACK SPRING	1	
33	9790981200	EARTH PLATE-P	1	
34	97SA318300	REFLECTOR HLD-L AS	1	
35	97SA318400	REFLECTOR HLD-R AS	1	

3. THE MAJOR MAIN SPARE PARTS LIST OF THE DECK

NO	STOCK NO	PART NAME	Q'TY	REMARK
1	97SA254830	S1-MECHA	1	
1-1	97SA254630	S1-MECHA	1	NTSC VCP
1-2	97PA265131	S1-MECHA	1	NTSC 2-HD Hi-Fi VCP
2	97S8101000	F0QTB12	1	PAL VCR
3	97SA256200	S1-MECHA	1	NTSC VCP
4	97S5500500	CR	1	PAL VCR
5	97SA256900	S1-MECHA	1	
6	97SA256700	S1-MECHA	1	
7	97SA256800	S1-MECHA	1	
8	97SA257200	S1-MECHA	1	
9	97SA313200	S1-MECHA	1	
10	97SA260100	S1-MECHA	1	
11	97SA255800	S1-MECHA	1	
12	97SA256600	S1-MECHA	1	
13	97SA257500	S1-MECHA	1	
13-1	97SA260200	S1-MECHA	1	
14	97S8009500	HVFHF0004AK	1	
15	97SA256400	S1-MECHA	1	